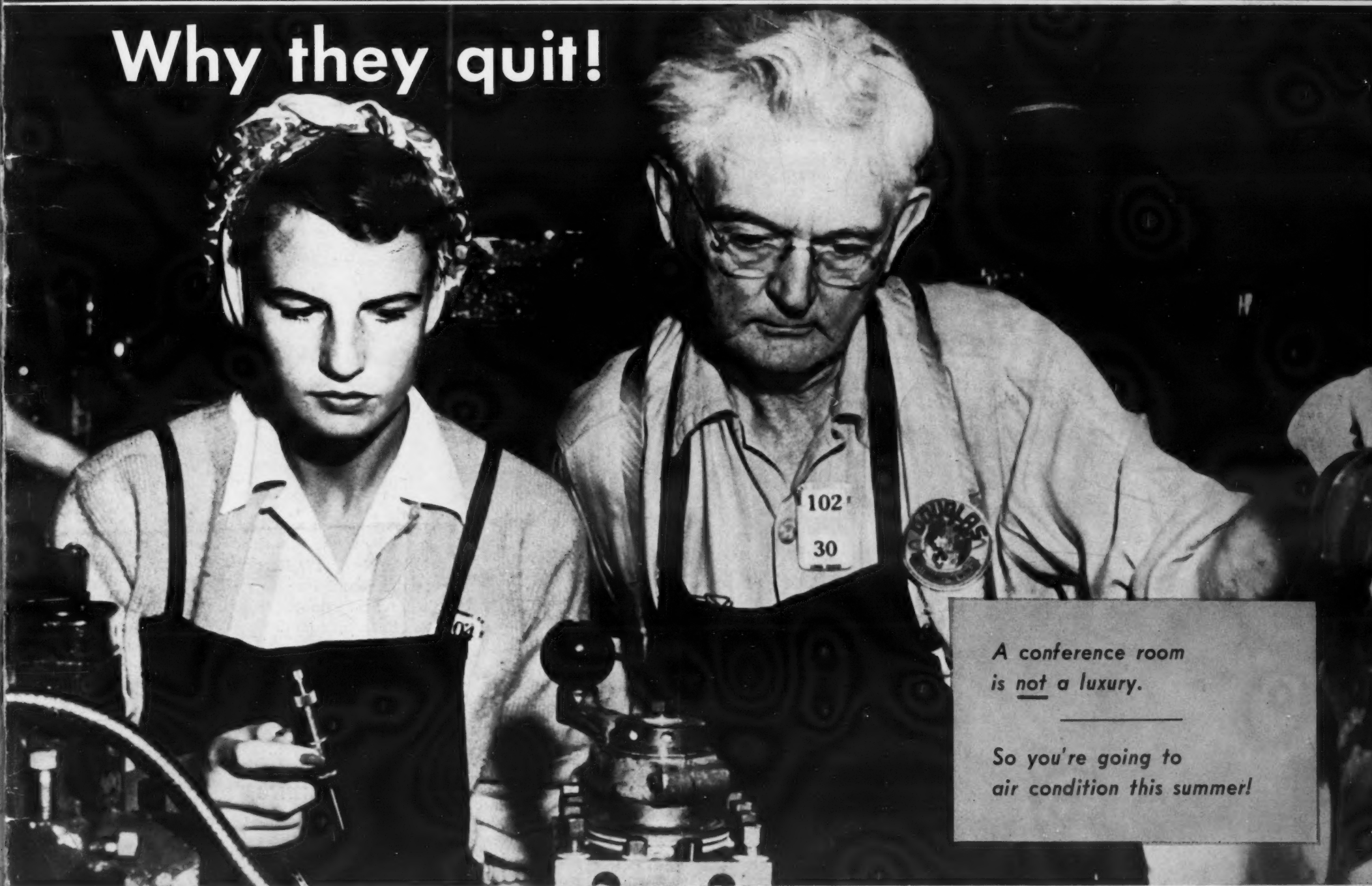


Management

# m e t h o d s

PRACTICAL SOLUTIONS TO MANAGEMENT'S PROBLEMS

## Why they quit!



A conference room  
is not a luxury.

So you're going to  
air condition this summer!

ROUTE **To**  
see pages

**To**  
see pages

**To**  
see pages

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see pages

# Good office furniture is like good factory tools

**T**HAT GOOD TOOLS are the most effective means for increasing productivity has long been recognized in American factories. Acceptance of this principle has enabled our industrial system to become the most productive the world has ever known. That this same relationship exists between tools and productivity in offices is often overlooked.

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The moral to this little tale applies to methods "inventors," too. It's true that some specialists can and do develop better systems on their own. But—for the most part—home-made management control systems have a way of compounding, not solving, original errors.

That's why, when you do pick up a fresh new idea from the pages of *Management METHODS*, we suggest you solicit expert help. There are two easy ways to do this. May we suggest:

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APRIL, 1953

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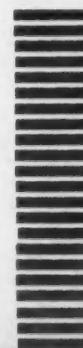
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# methods

APRIL 1953

VOL. 3 NO. 5

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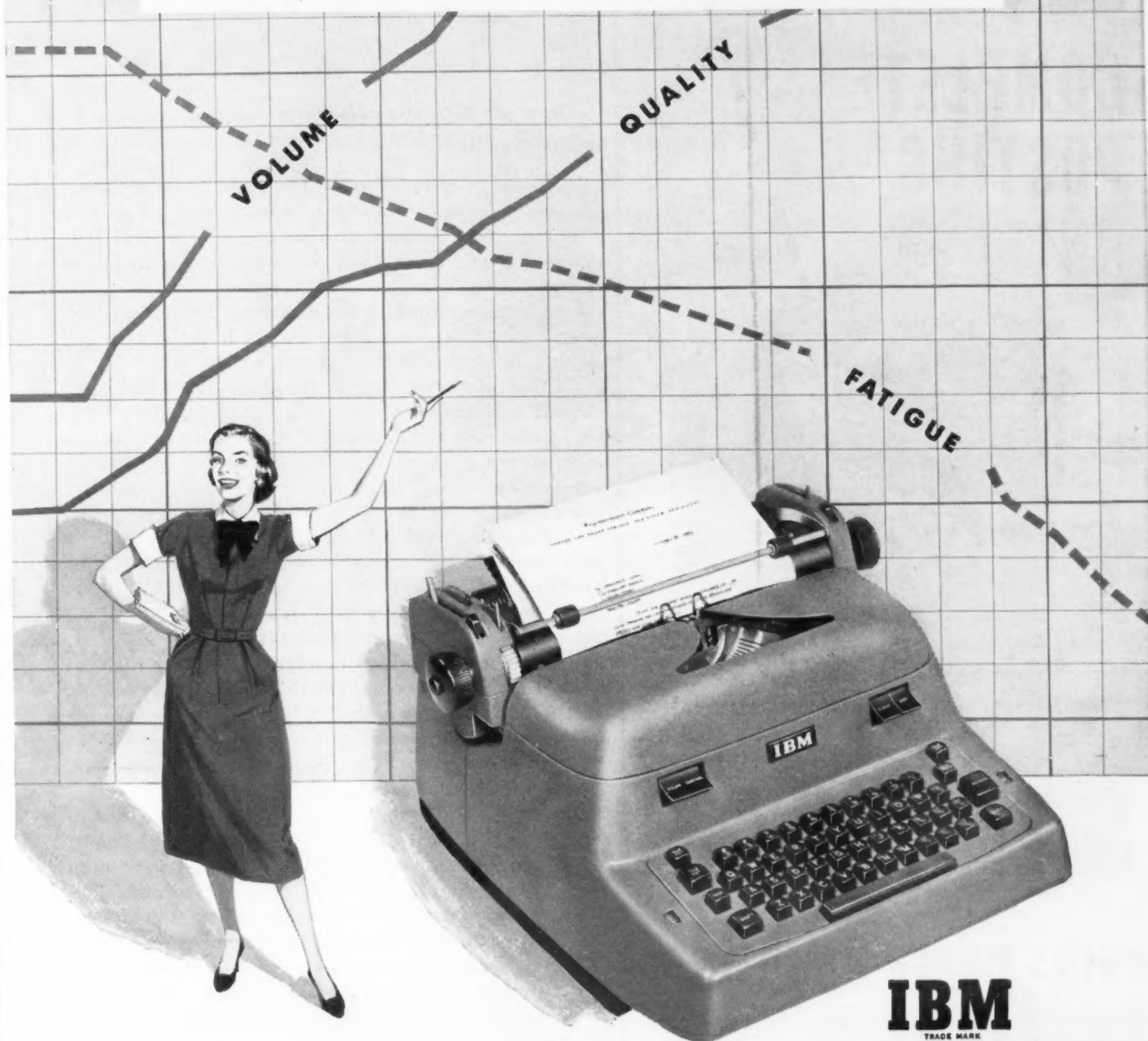
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april 1953

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## "I think..."

### PROS AND CONS TO THE EDITOR

Doctor compliments editor

Dear Mr. Editor:

Inasmuch as I believe that I occupy a rather unique position as a recipient of *Management METHODS*, I thought you might be interested in knowing a little about the values of your magazine and the products described in it to me.

I am a surgeon, owning my own business building with space to rent to another physician. I first became interested in administrative procedures when I was Executive Officer of Baxter General Hospital, a 2000 bed Army hospital in Spokane, Washington, during my Army service. I saw your publication for the first time about 1½ years ago when the administrator of Bethany Hospital in Kansas City, Kansas asked me to look it over and give him suggestions on methods and equipment that might be helpful at that hospital. This was shortly after a great flood had covered my office and I was at that time rebuilding. Your magazine was particularly helpful to me in suggesting efficient methods and equipment to incorporate in my reconstruction activities.

In the past year, I have purchased a number of items which I would not even have thought of if it had not been for *Management METHODS*. Among these items are a Remington electric typewriter, a Pres-to-Line copyholder, a "functional" desk, Oxford Pendaflex filing equipment, Globe-Wernicke file index cards, Kardex visible file equipment, a small duplicating machine, and Carbon-Pac carbon paper. I also purchased a new Dictaphone. Furthermore, in my relationship with Bethany Hospital, I have been associated with the advising and purchasing of other new Dictaphone equipment, record filing equipment, and we are at present purchasing micro-film equipment.

In other words, although I personally am a "small operator," my circumstances have been such that I have had occasion to use your advice greatly in the past year, and purchase of equipment by me, and those guided by my influence, have amounted to considerable money.

It seems to me that there are a number of fields in which your magazine could do additional exploration. At present it is getting bogged down a little on the subject of "forms." Judging from the advertising in the *February 1953* issue, where there was an ad for a Frigidaire air conditioner unit, I presume you are considering that. Many other magazines have had articles on this subject, but they all sounded as if they were written by the advertising man for the company instead of an unbiased individual who had actually used an air conditioner.

MAURICE A. WALKER M.D.  
Kansas City, Kansas

Editor's Note: For an article on Air Conditioning, see page 14 of this issue.

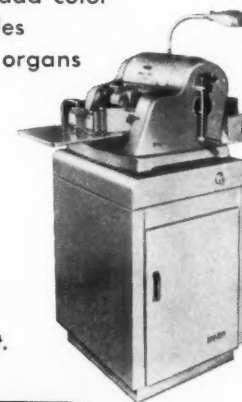


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methods



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## Writing for Management METHODS

Dear Mr. Editor:

Many thanks for your first-rate magazine, *Management METHODS*. I have enjoyed every issue, and find them literally packed with "idea-material." To anyone engaged in Systems work as I am, your magazine is a "must" on the reading list. I am circulating my copies to a wider circle each month, since each issue helps sell the systems concept in ways that I frequently cannot take the time to do.

I am interested in your booklet "Writing for Management METHODS," which is mentioned in the February, 1953 issue. Would you please send me a copy?

R. H. T.  
Philadelphia, Pa.

*Editor's Note: "Writing for Management METHODS" is a little booklet we have prepared recently for any of our readers who are interested in submitting editorial material or manuscripts. It covers such details as length of article, devices for telling a story clearly, what an article should accomplish and rates we pay our authors.*

### Request to reprint

Dear Mr. Editor:

We read with great interest the article that appeared in the February, 1953 issue of *Management METHODS* by Herman J. Daigneault entitled *How we raised productivity when the Scanlon Plan came in*. Since we have a version of the Scanlon Plan in effect here, we like to pass along to our employees interesting information pertaining to this plan in other plants. We would like to know, therefore, if you could supply us with 400 reprints of that article and if so, what the cost would be.

We plan to distribute these to our employees as an insert in our plant publication.

R. M. MAUZY, Ind. Rel. Div.  
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Indianapolis, Ind.

*Editor's Note: We would like very much to accommodate readers on the matter of reprints, however, we have no facilities to handle this in small volume. We suggest that this be done offset. The cost is low.*

In all cases we caution that permission to reprint or reproduce anything that has appeared in our magazine be obtained from the editor prior to proceeding with actual reprinting. All the material appearing in the magazine is copyrighted. However, in certain instances there is a prior copyright and permission must be secured from the holder of that copyright.

### Tax Tips comment

Dear Mr. Editor:

I find Mr. Caine's column on "Tax Tips" in *Management METHODS* very helpful and informative. I am especially pleased with the interesting way he presents his subject and gives examples to illustrate his points. Unfortunately, most tax services are quite tedious from the reader's viewpoint.

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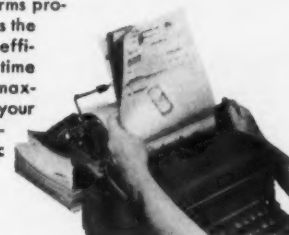
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## \$\$tax tips\$\$

Anticipating benefits  
on long-term  
capital gains

THE AUTHOR: N. R. Caine, who handles this "Tax Tips" column in *Management METHODS*, is also the editor of a widely syndicated column "Tax Pointers" which runs in newspapers throughout the United States. He is the author of several books on income tax and war contracts, and holds a C.P.A. degree in New York, New Jersey, Pennsylvania and California. A member of the American Institute of Accountants, Mr. Caine is a senior partner in the accounting firm bearing his name.

Wherever possible, a taxpayer should try to conform any transaction from which he expects to realize taxable income to the shape of the sale of a long-term capital asset. The advantages that he will thereby gain are substantial. First and foremost is the fact that he will reap the benefit of the "ceiling" tax rate on long-term capital gains. In sharp contrast to ordinary income tax rates which may soar to astronomical heights (92 percent in the top bracket), the rate of tax on the profit from the sale of a long-term capital asset may never exceed 26 percent. This "ceiling" provision places a high premium upon successful tax planning in this area.

A partial cataloging of the varied items to which the long-term capital gains treatment may be applied should not overlook the following important transactions: (next page, please)

\$ \$ \$ \$ \$ \$ \$ \$



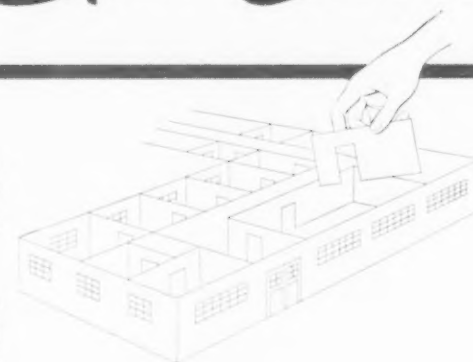
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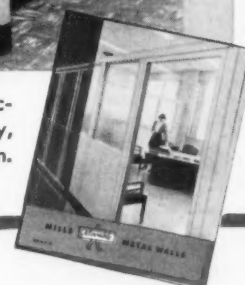
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2. The sale or exchange of any other capital asset that the taxpayer has held for more than six months. A wide range of assets fall within this classification: the sale of a personal residence; automobile; stock in a cooperative apartment; unimproved real estate (not held for sale, or used in the ordinary course of business); the sale of a partnership interest.
3. The receipt of property upon the liquidation and dissolution of a corporation (provided that the taxpayer has held his stock in the corporation for more than six months).
4. The profits from the sale or exchange of depreciable business assets that the taxpayer has held for more than six months.

A complete cataloging of these items should not fail to list the extension of the long-term capital gains treatment to lump-sum pension or profit-sharing plan payments. This valuable concession may be illustrated as follows:

Mr. Smith is an officer and stockholder in a corporation which has adopted a profit-sharing plan for its salaried employees. Under the terms of the plan, he is permitted to take all the benefits to which he is entitled under the plan in one lump-sum payment at his retirement.

If Mr. Smith selects this method of payment, he is entitled to treat the lump-sum receipt of his retirement benefits in exactly the same way as the receipt of a long-term capital gain. Reduced to practical terms, this means that he need pay no greater rate of income tax on his profit from the receipt than 26 percent (the present top on long-term capital gains).

This tax-savings treatment is tied to two important conditions:

*First:* The retirement benefits must be paid to the employee in one lump sum or in installments within one taxable year of the employee. (next page)

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A black and white photograph of a vintage Smith-Corona typewriter. The machine is shown from a front-three-quarter view, highlighting its dark, possibly metal or heavy plastic, body. The keyboard is visible, featuring dark keys with light-colored lettering. Above the keyboard, the brand name 'Smith-Corona' is embossed on the front panel. A sheet of paper is fed into the carriage mechanism at the top. The typewriter is set against a plain, light background.

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The new provision does not change the treatment of these payments in any way. It is aimed simply at those situations in which the employee accepts a lump-sum payment after the termination of his employment (either by assignment or release) in lieu of his right to continue payments over a period of time. Under the old law, the lump-sum payment would have been taxed to him in toto, as fully taxable income in the year of its receipt: under the new provision, the receipt of the lump-sum payment will be treated as the receipt of a long-term capital gain (with a top tax rate of 26 percent).

The provision requires long-range planning which should be initiated as quickly as possible in view of the twelve-year limitation with which it is impressed. It likewise requires careful and technical study before it is applied to a given situation. m/m

**\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$**

8



# diagnostics

F O R M A N A G E M E N T



THE AUTHOR: *Leslie M. Slote, Technical and Administrative Assistant to the President, Ketay Manufacturing Corp., handles this regular feature every month. The author functions at staff and operating levels on matters of administration, production, personnel, labor relations and management control. Readers are invited to submit "symptoms" from their own experience for Mr. Slote to "diagnose."*

## symptom

*We have been faced with a serious, growing problem of under-staffing. As personnel manager I am repeatedly called upon to draw from a tight labor market to fill specific scarce skills in both office and plant. My company pays lower than current market rates. As a result recruiting is difficult, and turnover is high. Management is not responsive towards instituting an apprentice training program because of time and costs involved . . .*

## diagnosis

In-plant recruiting, selection, and training—through job cycling or rotation—are called for in this case. It isn't too hard a nut to crack, for, essentially it calls for the effective utilization of your own office and in-plant skill resources. In short, scarce skills are to be *developed* rather than recruited.

The first step is to make a job analysis and evaluate the worker requirements needed for the classification to be filled. Careful comparisons show the similarities and relationships of these requirements to those of other job classifications in the office and in the plant. In a few cases in the factory, involving hand-labor operations, a methods analysis will show if it is possible to reduce extensive job requirements by simplifying and subdividing duties to increase the degree of specialization. This serves to isolate and concentrate specific scarce skills, resulting in a substantial increase in productivity, which in turn will mean fewer scarce jobs to be filled.

In one company I know a help-wanted "ad" on the bulletin board and in the company paper, offering an opportunity to work in a scarce classification to be filled, brought forth a qualified applicant from a non-critical job. Admittedly, it was a remote chance, but worth trying. Next, all personnel were asked to fill out a questionnaire listing their secondary skills, including practical job experience and training other than present occupation. This included past training in vocational, trade, service, or other schools, and avocational skills and hobbies. (It was decided that in the future, information on secondary skills and aptitudes would be obtained from new employees at the time of hiring, through interviewing and testing.) The secondary skills of employees were then inventoried and it was decided which ones could be converted or expanded to fit the scarce job category. Tabulation of all secondary skills for each employee was done on a visible record system that auto-



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matically furnished the information for instant reference. The next step was selection of in-plant trainees based upon secondary skills, test-discovered abilities and aptitudes.

Actual training was accomplished through job cycling, by having the worker spend at least half of each day learning the new job, and the remainder of the day back at his regular job. At intervals, additional understudies were added to maintain a reserve pool to compensate for normal attrition. *Basically, it was an accelerated line-training program, custom tailored to fit the specific needs of the individual employee.* Teaching was accomplished through demonstration and instruction given by an experienced worker. Care was taken to establish and explain exact training procedures and techniques to be followed by employee instructors. Progress reporting was a vital control element in the plan, and the immediate responsibility for success of the program was assigned to the line supervisor in charge of the trainee's unit.

The filling of scarce skills from within the plant, rather than attempting to recruit from the outside, offered employees an incentive for self-advancement, stimulated good employee relations, and materially helped to reduce grievances. It is of interest to note that contrary to expectations, relatively few trainees left for better paying jobs after acquiring experience. The answer may well be that sufficient job satisfaction is obtained because of the opportunity to learn a new skill, as well as the reward of advancement and promotion. m/m

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## COVER STORY

**Editor's Note:** According to the Bureau of Labor Statistics, 40% of all employee terminations are involuntary while 60% are voluntary. That means that 60% of the people you hire and train, leave your employ to work elsewhere in your area. These are people you don't want to quit.

The reasons why employees quit vary depending upon the type of work the employee does. In the retail-wholesale field, one employee out of two is replaced each year. In the clerical-administrative field, one out of five is replaced annually. Each year, one out of three employees in manufacturing industries leave their jobs for various reasons.

The cost of this turnover is considerable. It is generally agreed that it costs not less than \$50 per employee — often more — including the costs of recruiting, employing, and training, as well as the lost production and increased spoilage which results when an old employee is replaced by a new one.

Can this waste be avoided? If so, it is on the 60% of employees who quit voluntarily that you must concentrate.

In 1949, the Business Management Service of the University of Illinois made a monumental study of voluntary terminations in the state of Illinois. The results of this survey are reported below. They are well worth the scrutiny of top management men.

### The Business Management Service

The Business Management Service of the University of Illinois College of Commerce and Business Administration is the arm of the College which reaches out into the everyday lives of business and industrial men.

It is designed to help businessmen operate more efficiently and profitably by making available to them the latest information and research in "theoretical" business. It takes the findings of students of business at the University and digests them into a concise form that the time-conscious businessman can profit from in his day-to-

day operations.

Staff members of the Business Management Service are trained in several different management fields. They present digested business information to businessmen through special courses and conferences both on campus and at various centers throughout the state; through individual counseling; through extension courses in various business fields; through a library and research service; through correspondence with businessmen; and through a publication program.

# Why they quit

## Background Factors

In order to establish some generalities before examining specific reasons for quitting, the University first looked into the ages of the ex-employees of the sample. It was found that the average age was nearly 28—indicating relative maturity, an age at which people are not likely to quit jobs on the spur of the moment. It was also discovered that more than 80% of the group were married and had family responsibilities, another indication of stability. At the same time, since the sample was equally divided between men and women, sex was automatically compensated for.

The factor of "length of employment" was then examined. Were these people new employees who had not worked long enough to make a fair judgment of their jobs? Was there an over-balance of old-timers who had worked so long that their perspective was warped? The results proved that neither group predominated. Some people in the sample had worked only a matter of weeks, but these were bal-

anced against the large number at the other extreme who had been employed in the same company for 20 and even 25 years. The average length of employment for the entire sample was approximately 2¼ years, or over 26 months. Here again is evidence that the group concerned is a relatively stable and normal samples, and is representative of a cross section of employees in any industry.

## Variations by Type of Work

When the length of time a person had worked was compared with the type of work he did, some interesting observations evolved. For example, among clerical workers, the average employee had worked about 31 months in his job when he quit. Among retail employees, however, the average was only a little over 15 months. Here is an important consideration, then: *In the application of any corrective measures, the emphasis should be on the early months of employment for Retailing and on the later months for the Clerical and Manufacturing groups.*

From any point of view, an employee with three or more years of service is a valuable employee with a high skill level and considerable job know-how. The fact that one out of five of the employees who quit their jobs belong to this service classification should awaken employers to the very significant loss of productivity involved. On the other hand, since the proportion of new employees quitting exceeds the proportion of old employees in every occupational group, *it is obvious that the most critical period in the entire life of the employee on the job is the*

first three months of employment. It is in this early employment period that effective corrective steps can be taken most profitably.

### What Happens to Ex-Employees?

It was discovered that only 23% of those who quit jobs remove themselves completely from the labor market. That means that 77% could have been prevented from quitting if employers had been able to meet their objections before it was too late.

But anticipating the employee is not easy. For example, the Illinois researchers went to the companies themselves to find out what they had discovered from "exit" interviews, conducted when an employee quit. By examining the company records for the employees in the sample, it was discovered that in 37% of the cases the reason given to the company was completely different from that given on the University's questionnaire! In only 22% of the cases was there complete identity between the two sets of reasons. This should make employers

rather suspicious of the information obtained through the average "exit" interview technique. You are going to have to probe deeper for the full facts.

### Importance of Employee Attitudes

Employees who voluntarily leave their jobs seldom do so for any single reason. Ordinarily the "reason for quitting," when analyzed, is a *group* of factors, no one of which stands out as more important than the others. In most cases, when one reason does stand out as a single cause, this is in reality only the precipitating reason . . . an event or circumstance which occurred at the end of a long series of dissatisfactions. It was because of this fact that employees were asked to give the *three* major reasons for quitting rather than the *one* most important reason.

In Chart I, the attitudes of ex-employees on *general* factors are shown. (This should be compared with Chart II which shows "specific" reasons for quitting.) In examining the chart you will notice that four of the attitude questions brought out strong negative

responses. These were: dislike for job, "outside" problems, supervisors' discouraging suggestions, and "too many bosses." While these four loom as most significant in the formation of background attitudes, the others of lesser strength can not be disregarded. It is significant that the University of Illinois, after compensating for length of employment, sex, and other factors, felt it important to state, "It appears that poor supervisory relationships furnished the largest single source of dissatisfaction. Next in importance is attitude toward the job and toward the company."

They also state, "Only 18% of the reasons given for quitting were of a type that could be labeled as unavoidable. Stated differently, 82% of the terminations could conceivably have been prevented or controlled by the employer."

### Type of Work is a Factor

In studying the problem of why employees leave their jobs it is also important to know whether or not the

type of work performed is a factor. Because it would have been impossible to include all types of work in this phase of the study, the researchers divided all respondents into two categories: production and non-production employees.

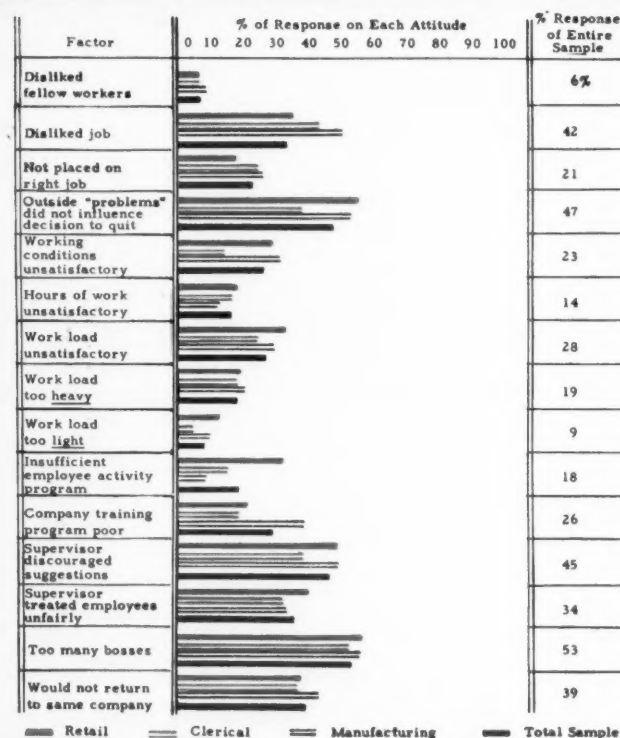
Examination of chart III shows that the response of the production group was much stronger on "job interest" and "not enough work to do." These two factors are obviously related, and it is interesting to note the wide divergence in the response of the two groups. On most of the other factors, it is important to notice that the degree of difference in response was relatively small—much smaller than might have been expected.

### Why They Quit

In summarizing the findings of the study, Dr. Robert D. Loken states, "The motivations which cause people to *quit* their jobs are the same as those which cause them to *like* their jobs. Over-simplified, these are the desire for personal security, personal status,

why  
employees  
quit

I. Attitudes of Employees on General Factors



II. Twenty-one Reasons Why Employees Quit

Rank Order	Reason for Quitting	Percentage Responding By Group			Percentage of Total Group
		Retail	Clerical	Mfg	
1	Low wages	42.9 (1)	21.6 (3)	28.8 (3)	31.1
2	No chance for promotion	25.6 (2)	25.4 (2)	35.1 (1)	28.7
3	Better job in view	22.4 (3)	19.3 (4)	24.3 (4)	22.0
4	To return to school	7.1 (9)	8.5 (9)	30.6 (2)	15.4
5	Poor supervision	19.8 (4)	6.2	11.7 (8)	12.6
6	Work unsuited to ability	9.6 (6)	12.3 (5)	14.4 (5)	12.1
7	Maternity	5.8 (10)	28.4 (1)	1.8	12.0
8	Lack of interest in job	8.3 (7)	10.0 (7)	11.7 (9)	10.0
9	Family moving	8.3 (8)	12.3 (6)	2.7	7.7
10	Job not permanent	3.2	6.9 (10)	12.9 (6)	7.6
11	Health	11.5 (5)	5.4	5.4	7.4
12	Poor conditions of work	5.1	3.8	12.6 (7)	7.1
13	Transportation inadequate	3.8	9.2 (8)	7.2 (10)	6.9
14	Dislike living in locality	4.5	6.9	3.6	5.0
15	Poor relations with fellow workers	5.1	2.3	7.2	4.8
16	Too much night work	4.5	2.3	7.2	4.6
17	Marriage	4.5	3.1	3.6	4.0
18	Care for children	3.2	6.2	1.0	3.4
19	Not enough to do on job	4.5	0.8	4.5	3.2
20	Poor housing	1.9	1.5	4.5	2.6
21	Poor recreation facilities	1.3	0.0	1.0	0.8

Bracketed numbers (1) in above columns give RANK ORDER of reasons for each occupational group



and job satisfaction. The degree to which these factors are absent or present in the work situation determines whether the individual employee will quit or continue to work productively for a long period of time. To control personnel turnover requires only that the employer make sure these values are present and recognized to the fullest possible extent. *This is more of a problem of communication than a demand for improvement of the work situation, in most instances.*

### What Can You Do?

He states further, "Effective employee turnover control will never 'just happen.' It can come about only through a planned and organized effort to eliminate negative factors in the working environment and to provide positive values which will mean increasing status, security, and satisfaction to the individual employee. This would require, in the ordinary business organization, a review of management objectives and plans to make certain that everything possible is being done

to improve the "climate" in which employees are working; review of *selection* and *placement* programs to make sure that the best possible methods are in use; review of the *employee* and *supervisor training* program to make sure that employees get a chance completely to understand their work, their company, and the relation of the individual employee to the company . . . with particular emphasis on *new employee training*; a review of *wage plans* to see that rates are equitable and directly related to work performed from an internal as well as an external point of view, and to see that *incentive values in wages* are operating as they should; a review of *job classification* plans to make certain that jobs are described properly and set up to encourage personal improvement and advancement. *In brief, this means raising the status of personnel activities within the company from the minor position now occupied to that of a major, planned function on the same level as operating, sales, and production functions.*" m/n

### III. Comparison of Reasons Given by Production and Non-Production Employees\*

Rank	Reason	% of Each Group Response on Each Reason										Average of Total Sample
		5	10	15	20	25	30	35	40	45	50	
1	Wages											31.1%
2	Promotion											28.7
3	Better job											22.0
4	School											15.4
5	Supervision											12.6
6	Placement											12.1
7	Maternity											12.0
8	Job interest											10.0
9	Family moving											7.7
10	Job not permanent											7.6
11	Health											7.4
12	Working conditions											7.1
13	Transportation											6.9
14	Locality											5.9
15	Fellow workers											4.8
16	Night work											4.6
17	Marriage											4.0
18	Child care											3.4
19	Not enough work											3.2
20	Housing											2.6
21	Company recreation											0.8

— Production Workers (including salespeople in Retail Group)  
— Non-Production Workers

\* Data based on 300 cases since some employees belonged in neither category

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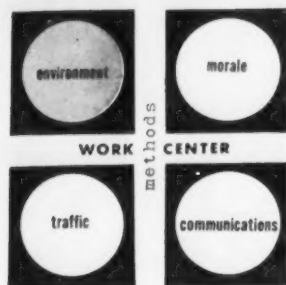
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HERE ARE FACTS ABOUT "PACKAGED" UNITS TO HELP YOU BEFORE YOU INVEST

# So you're going to air condition this summer!



**Editor's Note:** In 1952, the air conditioning industry had the greatest boom in its history. Sales far exceeded production. Conservative experts predict that 1953 sales will double those of '52. If you are thinking of air conditioning this year, don't delay too long. In spite of greatly accelerated production there is almost sure to be a shortage ahead. We hope the following facts and figures will help you evaluate your needs.

Before preparing this article, our editorial staff interviewed a representative group of businessmen to find out what they wanted to know about air conditioning. The three most frequently-asked questions were:

- 1) Why should I air condition?
- 2) How much will it cost?
- 3) What type should I buy?

These questions are answered below.

The big question, of course, is "Should I air condition?"—or, "Is air conditioning worth-while?" Most businessmen are satisfied that air conditioning is a good thing so far as *comfort* is concerned. But with their profits squeezed in a multitude of ways they are less inclined to invest in niceties. They expect their investment to pay for itself. Can it?

In a study conducted at Michael Reese Hospital, in Chicago, it was discovered that the best temperature environment for office personnel performing mental work was in the mid-70 degree range, and that efficiency dropped off sharply as the temperature be-

gan to go up. At 85 degrees, a person works at only 80% efficiency. At 95 degrees, efficiency is cut in half. The experiment shows that workers suffer an average job drop in mental efficiency of 40% during the hot, humid summer months.

In another study, conducted among actual users of air conditioning, the average increase in efficiency claimed ran between 20 and 30 percent. Translated into practical terms, under practical operating conditions, this increase means not only more work turned out, but fewer errors—a major factor in evaluating productivity.

Users reported other material benefits. Absenteeism actually dropped off during hot spells—employees preferred to work in cool comfort instead of staying home. Lower turnover of employees was claimed for air conditioned offices. And in larger offices, particularly, recruiting costs for new employees were considerably reduced in spite of the clerical shortage.

## Measuring the Savings

For the "hardheaded" businessman who wants something measurable in dollars and cents, there is a simple formula for calculating how fast his clerical savings will pay off his investment in air conditioning equipment. Glance at the chart in the next column. It shows a typical investment analysis for an office with 15 employees. Note that in the example used, air conditioning will pay for itself in less than two years.

In this example, the important variable is the "number of working days

## FIGURE YOUR SAVINGS

Average hourly wage rate	\$ 1.25
If in hot weather each employee loses one hour per day in efficiency (7½ minutes per hour—an extra trip for a cold drink—an extra chat about how hot it is!), the saving per employee per day with air conditioning is one hour's pay	
	1.25
Number of employees	X 15
Daily savings with air conditioning	18.75
No. of working days requiring air conditioning	X 75
Extra gross savings with air conditioning	1406.25
Operating cost (estimated)	
Electricity and water	\$250.00
Maintenance	+ 50.00
TOTAL	300.00
Extra net savings with air conditioning	1106.25
Your investment (\$1800.00) ÷ Extra net savings (\$1106.25) = 1.6 years	

requiring air conditioning". To estimate this factor for your city, the following chart is offered, prepared by air conditioning engineers on a basis of several years' experience with temperature levels throughout the nation.

## How Much Will it Cost?

Several factors will affect your costs—the type of unit you buy, the struc-



This five ton unit, and another one in the rear of the office, provides conditioned air for a large Work Center. Air is distributed to executive offices through ducts on the ceiling.



ture of your building, the amount of floor space to be air conditioned, and the "heat load" in your offices.

Let's consider the area to be air conditioned, first. Packaged air conditioning units (as opposed to central air conditioning) are sold in terms of "tons". In general, you can air condition from 250 to 400 square feet of

#### CITY WEATHER CHART

Average number of working days requiring air conditioning in representative cities

City	No. of Days	City	No. of Days
Atlanta	109	Louisville	95
Baltimore	98	Memphis	98
Boston	70	Miami	120
Chicago	78	Minneapolis	65
Cincinnati	94	New Orleans	113
Cleveland	77	New York	89
Dallas	110	Norfolk	100
Des Moines	85	Oklahoma City	110
Detroit	75	Philadelphia	93
Houston	113	Pittsburgh	78
Kansas City	95	St. Louis	96
Los Angeles	73	Washington	101

floor area for each "ton" of capacity. If your office has a large sun exposure, or there are other factors which may cause a high "heat load", figure 250 square feet per ton. By the same token, an office which is located on the top floor would probably also require use

of the lesser figure.

The cost for a ton of air conditioning ranges from \$350 to \$500 in packaged units. The type of units you buy, their capacity, and other factors described below, will affect your cost within this spread. Naturally, you will probably get prices from several suppliers before you make a purchase. Select a supplier who is reputable and who will give you expert advice. *In general, be suspicious of any bid that is considerably lower than another.* It's poor economy to under-estimate the capacity you need, and the practice results in unsatisfactory results, high maintenance costs, and eventual replacement of the unsatisfactory units long before they have been properly amortized.

Don't look for a "bargain". Factors such as installation costs, for example, are seldom reflected in "bargain" quotations. In general, installation costs are not high—but a reputable dealer will automatically include this factor in his price. He will also take into account the capacity of your electrical circuits, the population of the areas to be air conditioned, the direction of your window exposures, and special factors like the amount of lighting in the rooms, smoking, and other odors to be expelled.

(next page, please)



A packaged air conditioner, which can be seen in the background, air conditions a large business machine room. Notice that no ducts are required since the movable wall partitioning does not extend to the ceiling.

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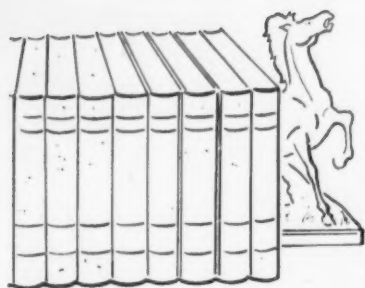
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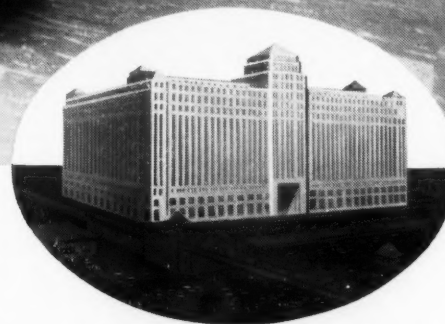


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### What Kind of Unit to Buy?

As differentiated from a central air conditioning system, unit air conditioners are of two types: window units and larger console-type cabinets. It is possible that you will want to use all of one type or combine the two, depending upon the structure and layout of your offices.

If you are air conditioning several floors, or even a whole building, packaged units offer distinct advantages. Unlike a central system, different areas can be "zoned" to fit the needs of different Work Centers. In addition, during servicing or maintenance, it is not necessary to shut down the entire system at one time. These installations also are flexible to meet changing conditions like shifts in departments and erection of walls. And if you move, your air-conditioning equipment can be moved too.

The larger units, as opposed to window cabinets, are excellent for large open areas. If individual private of-





fices are to be air conditioned too, insulated ducts may be run from the unit to these partitioned-off work stations. If you rent your building, be sure that building management will allow you to erect them. If not, window units can be substituted. It should not be construed, however, that window units are undesirable to do the *complete* air conditioning job. One recent installation in New York City, involves the use of 60 window-cabinets.

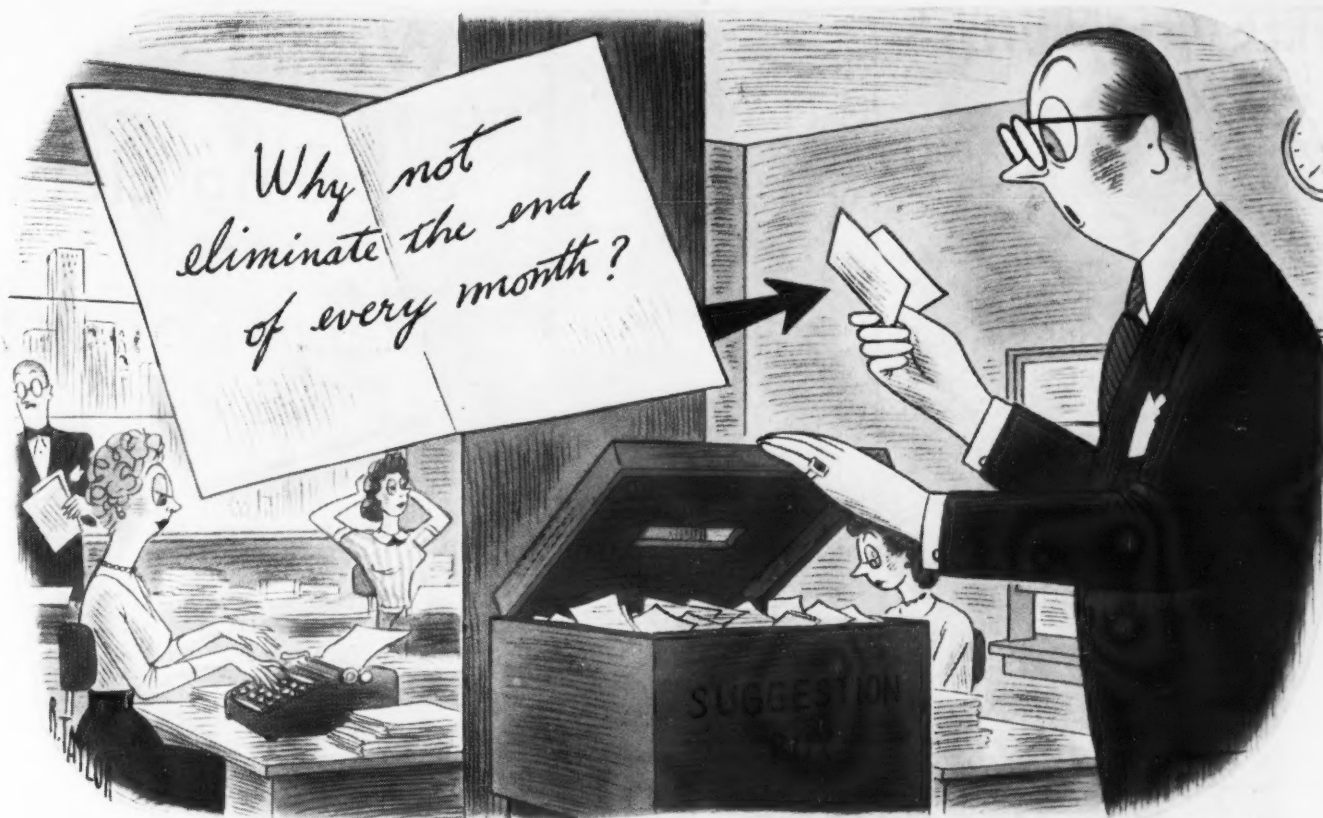
In using the larger units it is desirable to place them as close to the center of the area to be air conditioned as possible. In larger office buildings, however, there are often restrictions on the running of plumbing and wiring which will have some effect on unit location. Don't be worried by the possibility of a "draft" on personnel seated near the air conditioning source. Recent developments in louvering make it possible to direct the cooled air in such a manner as to avoid this effect.

#### New Developments

Today's packaged unit is far more than a mere cooling device. It filters the air, removing all dust, pollen, and dirt. The latter could be very important in reducing maintenance costs. It also acts as a humidity control, which can be just as important as the cooling effect so far as workers comfort and resultant productivity are concerned. It will also exhaust smoke and keep working areas well ventilated.

A relatively recent development is the "all season" unit with automatic thermostat control. These conditioners will heat a room as well as cool it. In Florida, California, and the Gulf states, this two-way function is particularly important—and it also has value in other areas where it isn't feasible to turn a central *heating* system on and off for temperature variations.

Little wonder then that air conditioning is no longer considered a luxury by the practical businessman for his general offices. Like his opposite number in the retailing field, who has long known that summer sales volume can only be maintained in air conditioned quarters, he looks at an air conditioning unit as a business machine—a machine that can be expected to pay for itself—and pay dividends too. m/m



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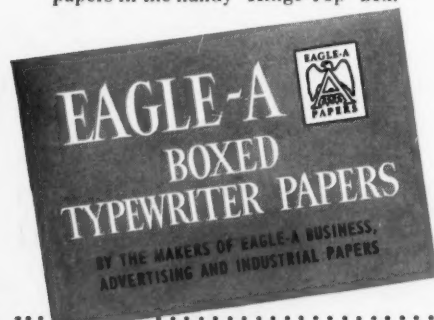
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NAME.....

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method  
of the  
month



# Would you trust a billing clerk to spell diaminobenzophenone?

By J. M. Hanley

MECHANIZED BILLING PROCEDURE TAKES THE RISK OUT OF TONGUE-TWISTING NAMES

Order entry and billing is at best a complex problem, but when names like 4-4-DIMETHYLAMINO-3-NAPHTHYLAZO-3-METHOXYBENZENE SULFONIC ACID, or N-N-N-N-TETRAMETHYL-4-4-DIAMINO-BENZOPHENONE are involved, the incidence of duodenal ulcers or typewriter-fatigue is alarming. Clerical personnel have been known to despair over less complicated names.

The Eastman Organic Chemical Department of Distillation Products Industries lists over 3600 different organic chemicals with names equally as complicated as the foregoing samples. These chemicals are sold to industrial organizations, educational institutions, research laboratories, and individuals on a world-wide basis in quantities from 1/10 gram to 500 kilos. The products have a variety of end-uses from strict research to commercial.

The usual method of transcribing manually from a customer's purchase order to an "order-invoice" form was naturally a laborious and time consuming operation. Numerous checking operations were required as a mere misspelling could result in entering an incorrect chemical. Our aims were to reduce clerical operations in entering and billing, and thereby expedite deliveries, a very important factor in any business, but particularly so in the chemical industry.

Initially the "order-invoice" forms were prepared on snap-out sets as

THE AUTHOR: Mr. Hanley was, until recently, Supervisor of the Systems Department of Distillation Products Industries. He is currently Personnel Manager, Consolidated Vacuum Corporation.

shown below. By the "order-invoice" form we refer to those papers required to withdraw material from stock, to package and ship the material, and to render a bill once shipment has been made.

Reviewing the procedure we found the following major steps were required to process each order:

1. Edit each customer's order for the usual customer information as to billing-shipping address, credit terms, parcel post zone, etc. Check carefully each chemical against the catalog to insure agreement of name and number, and correct each item necessary for transcription by the typist. (This latter operation was a major item in the editing procedure.)
2. Type an "order-invoice" set manually from the customer's order.
3. Check each set in detail against the

customer's order to insure proper transcription. (Make any corrections necessary.)

4. Check each chemical for stock location against a card file, and manually enter the shelf location of each item on plant copies of the set. (The nature of the chemicals themselves precluded any strict numerical shelf stocking.)
5. Check each chemical for applicable shipping regulations and enter manually on plant papers a code for such regulations. The nature and quantity of each chemical, as the melting-boiling points, toxicity, explosive tendencies, etc., govern the method of shipment as well as the type of container in which the item may be forwarded.
6. Following shipment, price each item by converting from the basic price

DISTILLATION PRODUCTS Industries										INVOICE	
ROCHESTER 3, N. Y. • DIVISION OF EASTMAN KODAK COMPANY										INVOICE DATE	
CLASS	ZONE	ENTRY DATE	ACCOUNT NO.	STATE							
D	C	8	11/24/52	123456							
ANY CORP											
755 RIDGE RD											
ANY WHERE USA											
INVOICE NO. 000000					YOUR ORDER NO. 999					YOUR ORDER DATE	
ANY CORP											
600 RIDGE RD											
ANY WHERE USA											
SHIPPING INSTRUCTIONS: BILL OF LADING OR EXPRESS RECEIPT WITH INVOICE THESE PRICES DO NOT EXCEED THOSE PERMITTED BY APPLICABLE FEDERAL STATUTE OR REGULATIONS TERMS: NET 30 DAYS - NO CASH DISCOUNT											
LOCATION	INSTR.	QUANTITY	W.T.	CATALOG NO.	PRODUCT DESCRIPTION	UNIT PRICE	TOTAL				
J 01 06		1	5 GM	6266	5 5 DIBROMO O CRESOLSULFONEPHTHALEIN	5.00	5.00				
H 03 4A		1	100 GM	243	630DIUM SALT						
H 29 35		1	1 GM	541	NNNN TETAMETHYL 44DIAMINO-BENZOPHENONE	4.95	4.95				
					PHENOLSULF						

A misspelling on the hand typed form could result in the entering of an incorrect chemical.

methods



as listed in the catalog to the ordered quantity.

7. Complete each invoice by typing unit price and extension.

The foregoing steps demanded major consideration in the preparation of the revised procedure though other items naturally influenced its final development. These "other" items included such things as accounts receivable and sales analysis operations, and maintenance of inventory records.

The goal was to devise a system that would reduce the aforementioned steps to a minimum. This could best be accomplished, we felt, by a procedure that would permit the re-use of some "source-document" containing all the necessary product information in a single unit. Attention was directed towards a unit ticket system of invoice with these unit tickets either preprinted, or created from metal or paper plates. This had some advantages over our previous system but the unit tickets became unwieldy on orders containing 20 or more tickets. Another difficulty was experienced in making changes in the "source-documents" for stock locations, shipping regulations, and prices change periodically.

The answer was found in the Cardatype Machine manufactured by the International Business Machines Co. Basically this unit is an electric typewriter activated by punched cards. The punched card afforded an excellent "source-document" which could be re-used as necessary and changed with ease. Our volume was too great for manual operation but too small to warrant an installation of large accounting machines; the Cardatype Machine fills this gap.

The Cardatype Machine consists of three main components, the primary document writer, the secondary writer and the auxiliary keyboard. Its operation is similar to other I.B.M. Accounting Machines in that it is controlled by a program tape and a control panel. The primary document writer transcribes information from a punched card, or from the combination of the control panel and program tape. It is also possible to type manually on this writer. The secondary writer can be tied into the primary writer as a slave machine for all operations with the ex-

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# **ONE RECORD CONTROL IN PURCHASE FOLLOW-UP NO REMINDER TICKLER SYSTEMS NEEDED**



A fact recognized and mutually agreed upon by all purchasing agents, is this: a purchase order placed is of no value until the order is acknowledged and the material received. That is why more and more purchasing departments are searching for new and better ways to make purchase order follow-up easier, faster, and more efficient. The need for such methods, especially in plants with both military and industrial demands to meet, is extremely urgent.

One of the most effective systems yet developed to follow up purchase orders and help insure maximum factory production, is the new "single source" VISIrecord visible vertical system. According to reports of Purchasing Agents at the Bausch & Lomb Optical Company, Bell Aircraft Corporation, Chevrolet-Tonawanda, Marshall Field & Company, Moore Business Forms, U. S. Graphite, and others, the VISIrecord method has been applied with remarkable results, in time saved, greater efficiency, economy and reduced personnel turnover.

Instead of depending upon sev-

eral copies of the original purchase order, filed in different units, the VISIrecord system controls purchase follow-up through *one record card* obtained as a "by-product" of order writing. This card, which can be created as a copy of a multiple-copy carbon interleaved set, or as a copy of any duplicating system, is placed in a specially designed VISIrecord unit. It can be filed in any sequence desired—by vendor and order number, or merely by order number. Because of the unique "three-dimensional" control feature, the name of the *Vendor*, the *Purchase Order Number* and the *Follow-Up* date are always instantly visible on every open order filed. Leafing through filed copies of orders and consulting separate memo pads is eliminated. Instead, sight-scanning of rows of cards, using the visible margin signals, is accurate and fast, and permits control at the rate of 10,000 to 12,000 records per hour. Every control element is always completely visible.

All operations *related* to follow-up are also faster and simpler, and leave less room for errors and duplication. Postings of

acknowledgments and promises, change notices, partial shipments and follow-up notations are all expedited by the "finding" speed and ease obtained only through the VISIrecord method. Purchasing Agents advise that this method is 35% to 50% faster than other systems used.

An interesting and important aspect of all VISIrecord systems, whether they are tailored for Inventory Control, Production Control, Credit Operations, etc., is that wherever such an installation has been made, operating along with other systems, clerks have actually competed with each other for the "choice" assignment of the VISIrecord units. They have found the work easier, less tiring, more accurate, more satisfying. The advantages to management of having such a wholesome personnel attitude toward the job are obvious and immeasurable.

For further information on Purchase Follow-up, and for a free survey of existing operations with no obligation, write to VISIrecord, Inc., Dept. M, Copiague, Long Island, N. Y.

(Circle 85 for more information)

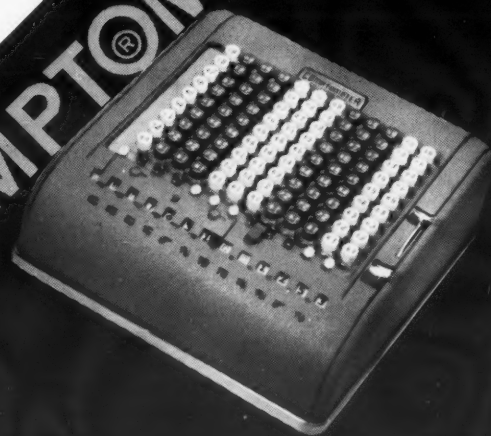
## SPEED SAVES MONEY

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ception of the manual typing. The auxiliary keyboard is used for numerical information only. In addition to the above, the Cardatype Machine is equipped with a tape punching mechanism which permits the recording of information from either the cards or auxiliary keyboard, and subsequent creation of punched cards for other operations, as sales analysis, inventory control, etc.

A punched card was prepared for each chemical in each listed size. These cards contain the stock location, the shipping code, an order quantity of one, the size and unit (100 Gm.-1 Kg.), the catalog number, the name of the chemical, the unit price and the extended price for that single unit. (An analysis of orders indicated that an appreciable percentage of the items were for single units as 1 x 100 Gms.—hence the unit and extended prices were punched in each card.) Each card is end-printed with the catalog number and size. Cards are end-filed numerically by catalog number and size, within catalog number. Different colored cards are used to distinguish the various grades of the chemicals, for it is possible to have the same chemical listed in six different grades. Where the chemical name is too long for a single card, a second card is used also with a distinguishing color.

Punched cards were prepared for "regular" or repetitive customers; these cards included customer class (dealer, manufacturer, miscellaneous, etc.), applicable taxes, parcel post zone and a six digit account number as well as the mailing address. When drop shipments were necessary a second card was prepared for the "ship to" address with a differentiating color. (next page)



123 8123456 ANY CORP-755 RIDGE ROAD-ANY WHERE USA-									
LOCATION	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10

55M 6266 5 5 018BROMO 0 CRESOL SULFONEPHTHALEIN									
LOCATION	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10

Special cards were prepared for shipping instructions, for example "Ship Via Blank Truck Lines" or "Via Express—Express Receipt with Invoice."

New forms were required to take full advantage of this speeded-up operation. Continuous forms were designed which permitted double spacing throughout the whole form. To eliminate delays in repositioning the typewriter to the normal "ship to" position, (tabbing was not practical), this address was placed beneath the "bill to" address and separated by the "Invoice No.," "Customer Order No.," and order date. The packing memo copy of the form was designed to provide container labels for either direct or dropped shipments.

An order is now entered as follows:

1. Orders are edited for billing and shipping information and for agreement of catalog name and number. Tedious red-penciling of the catalog names have been eliminated. Agreements have been made with some major dealers to order by catalog number only, thereby eliminating the check for agreement of name and number.
2. Customer's orders are turned over to the Cardatype operator who pulls

the customer's card and inserts it into the feed mechanism. The machine automatically types the address. While the card is being read, the operator inserts the invoice number in the auxiliary keyboard. By the time this has been accomplished, the machine had reached the blank titled "Invoice No." This is then read from the keyboard and the form is automatically spaced for typing the variable information—customer's order number and date. Automatic reading of the "ship to" card is activated by depressing a key on the auxiliary keyboard. Following the last line of the "ship to" address, the machine is automatically spaced to the "Shipping Instructions" blank, where a third card is read after which it is spaced to the product portion of the form.

3. The Cardatype operator pulls the product cards, one at a time dropping them in the reading mechanism. If the order quantity is a single unit, (as 1 x 100 Gms.) the card is read in its entirety. If multiple quantities are ordered, (as 2 x 100 Gms.) the 2 is entered into the auxiliary keyboard. An automatic stop has been wired to stop all reading

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The COSCO SECRETARIAL

Only \$29<sup>95</sup>\*



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(Circle 56 for more information)

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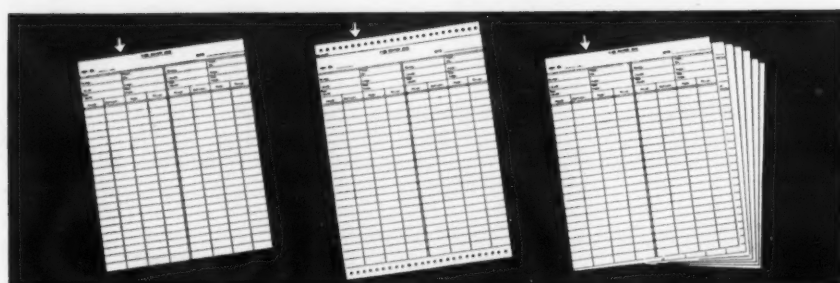
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(Circle 82 for more information)

in the "quantity" column to enable the operator to verify the quantity depressed in the keyboard. Reading operations are activated by depressing a key on the keyboard. (A code has been wired into the auxiliary keyboard to tell the machine to read the card in its entirety or to read the order quantity from the auxiliary keyboard.)

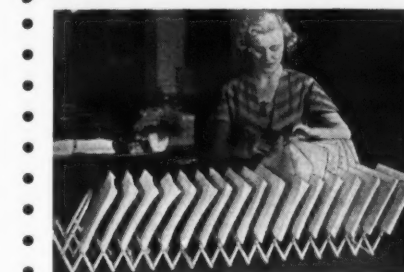
On all items where multiple units are ordered, reading is stopped after the unit price is printed, and the card is ejected. This is necessary because the machine has no extension feature. Ejection before reading the extended price shown in the "Total" column of the invoice is accomplished through the same code referred to above. (It is possible for the operator to refile and pull additional cards when one card is being read. In this way the operator can keep a steady flow of cards to the machine. Reading capacity is 600 characters per minute, but this is affected by stops, skipping, carriage turns, etc.) Through his portion of the entry procedure the operator has manually typed only the customer's order number and date.

4. Invoices are checked to insure that proper cards are used. (Product checking has been greatly reduced, for only the quantity, size and catalog number must be verified.)
5. Following shipments, the multiple quantity items are extended, applicable taxes are added and the invoice then footed. (All references to pricing schedules are eliminated.)

Basically this is our attempt to mechanize a tedious entry and billing operation. Entry time has been reduced by approximately one-half and billing time by roughly one-third. Increased work load has been assumed without adding to the staff; operator fatigue has been reduced appreciably.

Currently we are investigating other possible uses of this machine to further mechanize office operations. Most noteworthy of these possibilities are the preparation of quotations and the preparation of copy for use in offset printing. The latter field offers some definite economies in preparing catalogs, price lists, etc. m/m

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(Circle 43 for more information)  
methods



# thought starters

## PERSONNEL

thought starter

### How to compute elapsed days for accounting purposes

Computing the number of elapsed days between given dates is frequently necessary in the fixing of Post Employment Compensation, various Plans of Retirement, Length of Service Analyses, Insurance Records, Step Rate Compensation based on service, and Personnel Records. In many other instances, it is desirable to express a time span in terms of days between given dates.

Such determination is a simple mechanical process for users of punch cards.

The first requirement is the construction of a chart which assigns a numeric value to the days of the year, starting with 365 on January 1, and descending in value to 1 on December 31. A subsidiary column of the chart can carry values to be utilized during leap years in which the day value is inflated by one between January 1 and March 1 resulting in a year count of 366 days.

In an instance of application, viz., term of employment, the IBM card denoting the date of Entering Service, is expanded to include two additional fields to provide for registering constructive days from the date on the card to the end of the year, together with a leap year adjustment field. The figure for constructive days is obtained and punched from the aforementioned chart. For changes that occur within a leap year the constructive days are read from the subsidiary column of the charts.

In order to perfect the elapsed count, the extra leap year days of intervening years must be taken into consideration, thus the provision on the card of a leap year adjustment factor. This factor consists of no more than the number of years prior to the employment year back to and including the preceding leap year. As an example, if employed

in 1934, the previous leap year would be 1932 or a leap year adjustment of 2 years which is registered in the adjustment column.

The Termination of Employment Card need be punched with only the terminating date and the constructive days to the end of the termination year, as obtained from the chart.

The punching of these control factors constitutes no measurable burden as only two cards need be created during the employment life of a single employee.

For a diagrammatic description of the above calculations, and an example of a problem and solution, Circle number 5 on the Reader Service Card.

## METHODS

thought starter

### Pre-printed photocopy paper reduces paper work costs

A clever new development whereby photocopy paper is pre-printed is expected to materially reduce copying costs. Many new applications have been uncovered to answer the needs of different types of businesses. The plan described below, in use by a prominent insurance company, is typical.

The company's Investment Department uses photocopy paper, the top half of which is pre-printed with complete tax information to be asked. The bottom space is blank (See cut.) The blank half is used for property descriptions made directly from the company's record cards. Consequently, when any tax information is required on real estate, a photocopy is quickly made directly from company records right onto the pre-printed tax form. The copy is then forwarded to the tax collector's office to be filled out for the insurance company's use.

The Public Works Department of a large eastern city has developed another application. Instructions for repair work are filled in on a pre-printed form on the top portion of the sheet, and a section of the city

PROVIDING FOR GROWTH  
DISTRACTIONS AVOIDED  
DETROIT  
DISTINCTIVE APPEARANCE  
says Wrigley Stores, Inc.  
engineered modular offices  
GLOBE-WERNICKE  
**TECHNIPLAN**

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**ORDERLY OPERATION** is the immediate result of TECHNIPLAN modular design making the best possible use of valuable office space. Flow of work is directed along smooth, unbroken lines. Complete flexibility of interlocking-interchangeable units permits rearrangement at any time, quickly, without special tools or skill.

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## methods



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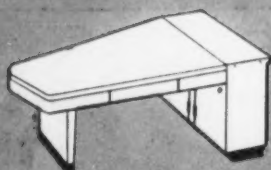
Less Floor Space

Easier Access

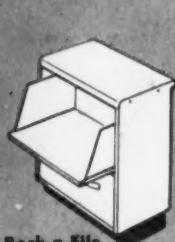
Maximum Convenience

Greater Safety

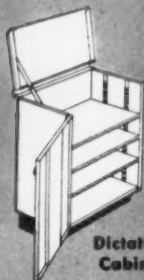
These Are The ROCK-A-FILE  
Steel MODULAR Units.



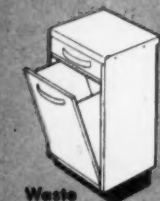
Desk



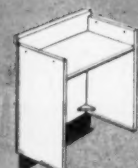
Rock-a-File



Dictating  
Cabinet



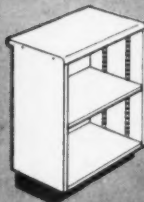
Waste  
Receptacle



Typewriter  
Cabinet



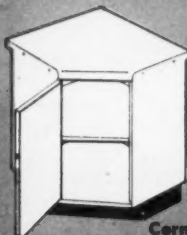
Drawer  
Cabinet



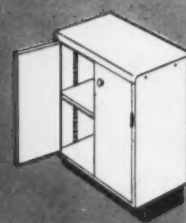
Book Case



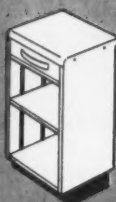
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## Which would you choose?

**This Ordinary Office Layout  
Is Expensive . . . Requires a  
12' x 14' Room!**

That's right—the cost is high and you only get three pieces of good grade ordinary office furniture: desk, table and bookcase. And you need an office measuring at least 12' x 14' to comfortably accommodate them.



**This 8-piece Rock-a-File  
MODULAR complete layout  
costs less, looks better  
and requires a room  
only 10' x 12'!**

Amazing but true! You get a total of eight pieces—a complete office layout—at a lower cost with Rock-a-File MODULAR Steel Furniture. The complete layout includes desk with storage compartment, telephone cabinet with drawer, four-drawer cabinet, two-shelf corner cabinet, Rock-a-File filing cabinet with drawer, two-shelf bookcase and two decorative end pieces! And every unit in the entire ensemble is within arm's reach!

(Circle 32 for more information)



# Rock-a-File

## ALL-STEEL FILING CABINETS

Easier, Faster Filing • Less Floor Space

Rock-a-File Cuts Filing Costs  
by Putting Idle Space to Work

In hallways, alcoves, corridors, between pillars or behind a desk—anywhere there is insufficient room to pull out a file drawer—Rock-a-File makes idle space filing space!



Rock-a-File's revolutionary side-opening compartments make filing faster and more efficient because each compartment "rocks" open to make its entire contents instantly accessible. More than that, *Rock-a-File actually requires less floor space than old-fashioned drawer-type files!*

Rock-a-File compartments project less than eight inches when open, "rock" open and shut effortlessly, and permit two or more persons to use the same file cabinet simultaneously. Alcoves, corridors, small corners and many other hitherto impractical locations become ideal filing space with Rock-a-File.

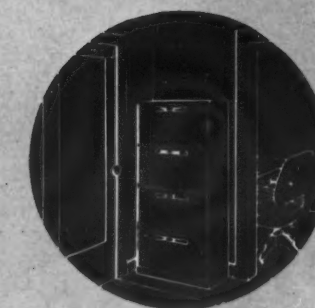
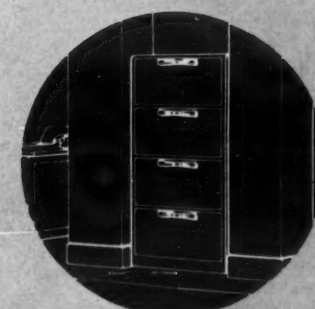
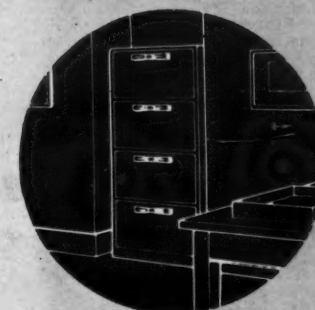
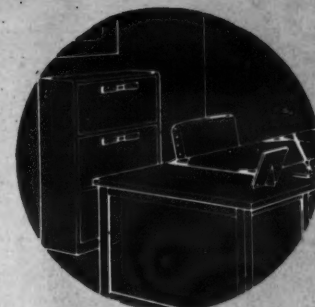
And Rock-a-File is safe, too . . . gravity center remains always within the cabinet; no danger of toppling, even with lower compartments empty.

(Circle 38 for more information)

A typical vault installation showing 4-compartment and 2-compartment Rock-a-Files in tiers.



A 2-compartment Rock-a-File in private office use. Note close position . . . no need for user to rise; just swing around in chair.



# Rockwell-Barnes Company

35 E. WACKER DRIVE • CHICAGO 1, ILLINOIS

## A partial list of Rock-a-File users:

Waukesha Memorial Hospital  
Waukesha, Wisconsin  
Chicago Rawhide Company  
Chicago, Illinois  
Sunbeam Corporation  
Chicago, Illinois  
G. D. Searle & Company  
Chicago, Illinois  
Union Asbestos & Rubber Company  
Chicago, Illinois  
Robert Penn & Company  
Chicago, Illinois  
Oakwood College  
Huntsville, Alabama  
Pepperell Manufacturing Co.  
Pepperell, Alabama  
Druid City Hospital  
Tuscaloosa, Alabama  
State of California  
Department of Mental Hygiene  
Sacramento, California  
Wallace Barnes Company  
Bristol, Connecticut  
Seaboard Air Line Railroad Company  
Columbus, Indiana  
International Harvester Company  
Motor Truck Division  
Ft. Wayne, Indiana  
Second Congregational Church  
Holyoke, Massachusetts  
Institute for Trend Research  
Hopkinton, New Hampshire  
Berteau Lowell Plating Works, Inc.  
Chicago, Illinois  
U. S. Naval Supply Depot  
Bayonne, New Jersey  
Koppers Company, Inc.  
Tar Products Division  
Pittsburgh, Pennsylvania  
E. T. & W. N. C. Transportation Co.  
Chattanooga, Tennessee  
Georgia Land Title Agency, Inc.  
Rossville, Georgia  
Alvin Industrial School District  
Alvin, Texas  
Trane Company  
LaCrosse, Wisconsin  
Griffith Electric Supply Company  
Trenton, New Jersey  
Sweet Home School District No. 7  
Eggertsville, New York  
Winona National and Savings Bank  
Winona, Minnesota  
Convair  
San Diego, California  
Illinois Central Railroad  
Chicago, Illinois  
Underwriters Laboratories, Inc.  
Chicago, Illinois  
Northwestern Railroad Company  
Chicago, Illinois  
Chicago Title & Trust Company  
Chicago, Illinois  
Crane Company  
Chicago, Illinois  
McDonnell & Miller, Inc.  
Chicago, Illinois  
Harris Trust & Savings Bank  
Chicago, Illinois  
Griffith Institute & Central School  
Springville, New York  
Atlas Powder Company  
Chattanooga, Tennessee  
Agnew State Hospital  
Agnew, California  
Illinois State Normal University  
Normal, Illinois  
Illinois Agriculture Auditing Association  
Chicago, Illinois  
Public Savings & Loan Association of Chicago  
Chicago, Illinois  
William Wrigley Jr., Company  
New York, New York  
Pan American World Airways System  
Long Island City, New York  
Standard Rate & Data Service, Inc.  
Evanston, Illinois  
Compensation Research Bureau, Inc.  
Chicago, Illinois  
Central of Georgia Railway Company  
Macon, Georgia  
State Farm Mutual Automobile Insurance Co.  
Bloomington, Illinois  
Second National Bank of Philadelphia  
Philadelphia, Pennsylvania  
Smith, Kline & French Laboratories  
Philadelphia, Pennsylvania  
Griffin Grain Company  
Chicago, Illinois  
Southern Pine Electric Cooperative  
Brewton, Alabama  
The Moffat County State Bank  
Craig, Colorado

## Only *Rock-a-File* Has Side-Opening Compartments

### The *Modern* way to file!

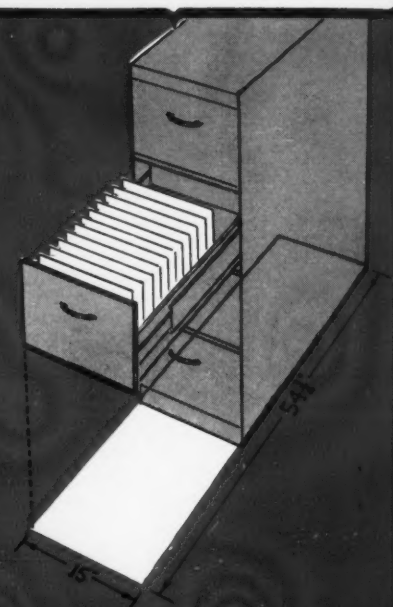
Because of Rock-a-File's revolutionary side-opening compartments, the entire contents of the cabinet are accessible at once—all compartments can be open at once, providing a series of open shelves. The last item in a Rock-a-File is as quickly accessible as the first.

Rock-a-File compartments can remain open throughout the day. Filing and finding is faster because there is no need to open and close drawers all day long.



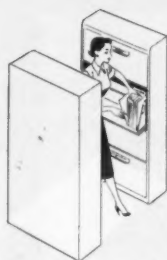
## Here's the Difference!

... how Rock-a-File  
saves nearly 40% in  
costly floor space!



Any size standard drawer-type filing cabinet requires 821 square inches of floor space because drawer projects nearly double cabinet length when open.

## Save Valuable Floor Space with Rock-a-File



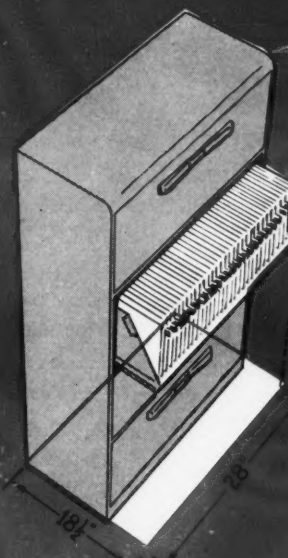
The area required for two 4-drawer filing cabinets is 76" x 30"—a total of 15.8 square feet. The area required for two 4-compartment Rock-a-Files is only 57" x 28"—a total of only 11.1 square feet. The area required for two 4-drawer filing cabinets,

with aisle space for one person to pass, is 93" x 30"—a total of 19.3 square feet. The area required for two 4-compartment Rock-a-Files, with aisle space for one person to pass, is 69" x 28"—a total of only 13.4 square feet!



*Write today* for free descriptive folder... learn  
how Rock-a-File can save time, space and costs in your business.

(Circle 38 for more information)



A Rock-a-File of same capacity requires only 518 square inches of valuable floor space—almost 40% less—because two-thirds of opened compartments remain within cabinet and project outward less than eight inches!

**Rockwell-Barnes Company** 35 E. Wacker Drive • Chicago 1, Illinois



# design form

## Follow-up billing plan saves money, improves customer relations

**\$25  
IDEA** from G. Bernard, Publisher  
Jewelers' Buying Guide  
New York, New York

In the past, our firm has had a great deal of expense and a loss of efficiency in our subscription billing. It is necessary to understand the nature of the beast in order to see what corrective measures were taken and how they improved the situation.

Once a year, we ship a directory to a subscription list of approximately 20,000 names. After, or in conjunction with, the shipping of the books, we mail our bills. Under our old system, upon receipt of payment, the stencils were coded and then transferred to a new galley. The remaining stencils were then used in a second billing, etc., through four billings. Sometimes we even used a fifth.

Since we felt it was necessary to inject good will into our billing situation, we designed a form with the help of Reply-O-Products. The bill form (see cut) is an original billing, three statements, and an office record. In each mailing we are able to use a letter, duplicated on previously prepared Reply-O letterheads, embodying information pertaining to the conditions of the moment, possibly helpful to the subscriber, or to the promotion of our own publication. In this manner, it is not a cold billing technique, but a warm contact.

The efficiency of this method is greater than the method previously used because immediately upon receipt of payment, all of the remaining billing portions are destroyed and the

subscriber is not annoyed by statements of a bill paid.

The records are in the office under our complete control, and, therefore, not subject to the errors that creep into the handling of stencils. We figure that this method, besides increasing efficiency and creating better relationships with the subscribers, will save approximately 18% of our normal costs of handling. As you can see, the method is a combination of a fairly common multiple statement and the Reply-O letter, combining the best advantages of both.

### Eliminates Mail House Processing

Previously, when a payment was received, it was necessary to make out cards, or correct galleys of our addressing plates, and then send the corrections to our mail house where our stencils are maintained, so the plates could be transferred from the unpaid to the paid files. This involved a lapse of time. Under the new system, when mail is received, it is sorted by the type of return envelope used, then opened and given to the proper party. The returned invoice and check are then processed. The check and the office record are stamped with identical numbers, the office record is then filed and the check deposited.

When we are ready for our next mailing, we simply remove the next statement and deliver it to our mail house and it is mailed within 24 hours. This means that when we get into the mail, all "pays" have been removed and far fewer cross in the mail than under our old plan.  $\text{m/m}$

**Jewelers' BUYERS GUIDE**  
1319 BROADWAY, N. Y.  
Phone 7-6868

TO: Jewelers' Buyers Guide  
1 Copy 1953 Edition  
JEWELERS' BUYERS GUIDE

When the 1954 Edition of JEWELERS' BUYERS GUIDE is published next year, your subscription will be automatically renewed so that you receive the new edition without delay. If for some reason you do not wish to receive the new edition, please check here ☐

You will have received by now your copy of the new 1953 Edition of the JEWELERS' BUYERS GUIDE - the trade's ONLY directory - which you asked us to send you as soon as it is published.

More than 2000 changes and additions have been made in the GUIDE - each of them necessary to keep you up to date. That's why we rushed to you your copy of the new Edition. --A we urge you not to use the older edition any longer. --A in the previous book is now out of date.

Find the best sources of fast-  
ise...use it THROUGHOUT THE YEAR  
and of merchandise that you can  
fitably.

The Guide is the best and most com-  
your trade. You will find that it  
moment you start using it.

Place-card from the top of this letter  
or remittance. A post-paid return en-  
your convenience.

Cordially yours,  
G. Bernard  
Publisher

TO: Jewelers' Buyers Guide  
1 Copy 1953 Edition  
JEWELERS' BUYERS GUIDE

When the 1954 Edition of JEWELERS' BUYERS GUIDE is published next year, your subscription will be automatically renewed so that you receive the new edition without delay. If for some reason you do not wish to receive the new edition, please check here ☐

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The cards are attached in their original form but perforated to permit them to be individually detached for each step in the follow-up operation. Note that a card slides into "pocket" of letterhead beneath the die-cut window.

# ***NOW*** copy any size form with COPYFLEX



The desk-side Model 14 COPYFLEX machine copies anything typed, printed, written or drawn on ordinary translucent paper. In seconds, it gives you a direct, errorproof, ready-to-use, black-on-white, *diazotype* copy. It handles any size office form from a big accounting worksheet to a small memo. Copying cost averages less than 2¢ per sq. ft. No exhausts, dark rooms, messy inks or stencils are needed.

## **COPYFLEX "ENGINEERED PAPERWORK" SAVES RAILROAD \$78,400 A YEAR!**

Everywhere, companies large and small are cutting costs by engineering their paperwork with Bruning Copyflex.

For instance, a major Eastern railroad\* turns out 16,000 copies of way bills every hour with Copyflex, thereby cutting paperwork costs by 40%, saving \$78,400 annually — in a single billing operation.

A leading distributor gets invoices out on time with only half the office force formerly needed.

A bank saves \$10,000 a year by engineering paperwork in its trust department.

An insurance company saves \$100,000 annually with Copyflex.

And there are many more examples of the way Copyflex can cut costs by engineering paperwork for *billing, accounting, purchasing, general copying and systems.*

Start your efficiency program now. Send the coupon today.

*\*Name on request.*

CHARLES BRUNING COMPANY, INC.  
4700 Montrose Avenue Chicago 41, Illinois

☐ Send me free booklet on COPYFLEX 14.  
☐ Show me how I can use COPYFLEX in my \_\_\_\_\_ paperwork.

Name \_\_\_\_\_ Title \_\_\_\_\_  
Company \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Offices in Principal Cities M43



(Circle 69 for more information)

## Are you "getting through" to your employees?

### READING RACKS AID COMMUNICATIONS

A recent study in a large southern chemical firm indicates that you can profit by asking whether you are truly in communication with your employees. This firm, which had liberal employee benefit programs, conducted a survey to determine the attitude employees had towards the company. The results were astounding. For example, despite the fact that the company paid the *entire cost* of the firm's accident and sickness plan, 21% of the employees thought the company paid too small a proportion! As for the retirement plan, the company paid twice as much as employees, but 27% of the employees thought they, themselves paid all or most of it, 38% said employees and the company paid about the same, and only 17% thought the company contributed most.

This company lost out because the facts about its programs were not made easily available to employees.

### How to Reach Employees

Although management is continually faced with this problem, it can be overcome by placing well conceived literature in the employees' hands on a continuous basis. One fairly recent development for *transmitting* information is the reading rack.

The idea of placing reading racks in churches and Y.M.C.A.'s is not new, but for the first time firms are offering reading rack service for offices and factories throughout the country.

### Here's How it Works

A firm subscribing to the reading rack service purchases the racks which cost from \$3 for a small one, to \$45 for one which serves 300 employees. The person in charge of the racks, usually the Director of Personnel or Industrial Relations or one of his staff, periodically receives a list of booklets

### Survey of actual experience in several representative companies

Company	Est. No. of Empl. Exposed	Average No. of Booklets Shipped Each Week	Average Pick-up Rate	Percentage Employees		Is Reading On the Job a Problem?	Any Unfavorable Union Reaction?	How Many Books A Year Would Be Desirable?
				Off.	Plant			
Alum. Co. of America.....	18,000	10,000	55%	not furnished		no	no	60
American Airlines .....	1,500	825	55%	27%	73%	no	no	60
Atlantic Refining Co. ....	1,800	1,600	89%	100%	—	no	no	50
P. Ballantine & Sons.....	4,000	2,250	56%	24%	76%	no	no	50
Gen. Tire & Rubber Co....	2,800	800	35%	29%	71%	no	no	70
The Hanover Bank .....	2,000	800	40%	100%	—	no	no union	60
Kelsey Hayes Wheel.....	3,200	1,950	61%	16%	84%	no	no	60
McCall Corporation .....	3,000	1,500	50%	21%	79%	no	no	50
Pittsburgh Plate Glass...	22,000	11,200	51%	5%	95%	no	no	100
Russell, Burdsall & Ward Bolt & Nut Co. . .	650	225	35%	23%	77%	no	no	100
Standard Oil .....	1,500	800	53%	9%	91%	no	no	50

methods





Typical reading rack offers employees a variety of instructive pamphlets.

to be released by the service. In addition, sample copies are sent for inspection several weeks before the scheduled shipping date. Management can select any of the titles, which are distributed in the following proportions:

Social and Economic Problems	30-35%
Health and Safety	10-15%
Home and Recreation	20-25%
Inspirational and Self Help	20-25%
Americana	5-10%

Or, if you prefer, booklets relating directly to your firm can be substituted.

#### What the Service Costs

Due to the large number of booklets printed, the cost of the service is low—only six cents per book, including shipping and handling charges. Experience has shown that 50% of the available booklets are picked up, although a higher percentage of booklets of unusual interest are taken. Thus a firm of 500 employees will normally order 250 booklets a week. The service, therefore, costs approximately \$1.56 a year for each employee. (Another factor which keeps the cost low is that all unused booklets may be returned for full credit as no contracts are signed.)

#### Advantages of the Service

Unless a firm is large enough to absorb the cost of editorial and art staffs, company prepared booklets are too expensive. Of equal importance, reading rack service firms have developed the technique of speaking the employees' language. The resulting literature is more effective, and will be better received than material which comes directly from management.

For more information, Circle number 1 on the Reader Service Card.

# Here are metal office chairs with unbelievable resistance to wear—thanks to STURLON<sup>®</sup> an extraordinary new finish



You will be hearing a lot about this extraordinary new finish. As far as office chairs are concerned (Sturgis is the only maker of office chairs with the rights to use STURLON), it means that you may now buy steel chairs with unbelievable resistance to wear normally resulting from scuffing and repeated bangings of chair against chair.

STURLON is sprayed on and infra-red baked to a thickness about four times that of other finishes. Independent laboratory tests show STURLON has a resistance to abrasion 10 to 20 times greater than that of other finishes. This means that the STURLON finish will endure and continue to protect the metal indefinitely.

#### And that isn't all—

STURLON is wonderfully warm and pleasant to your touch.

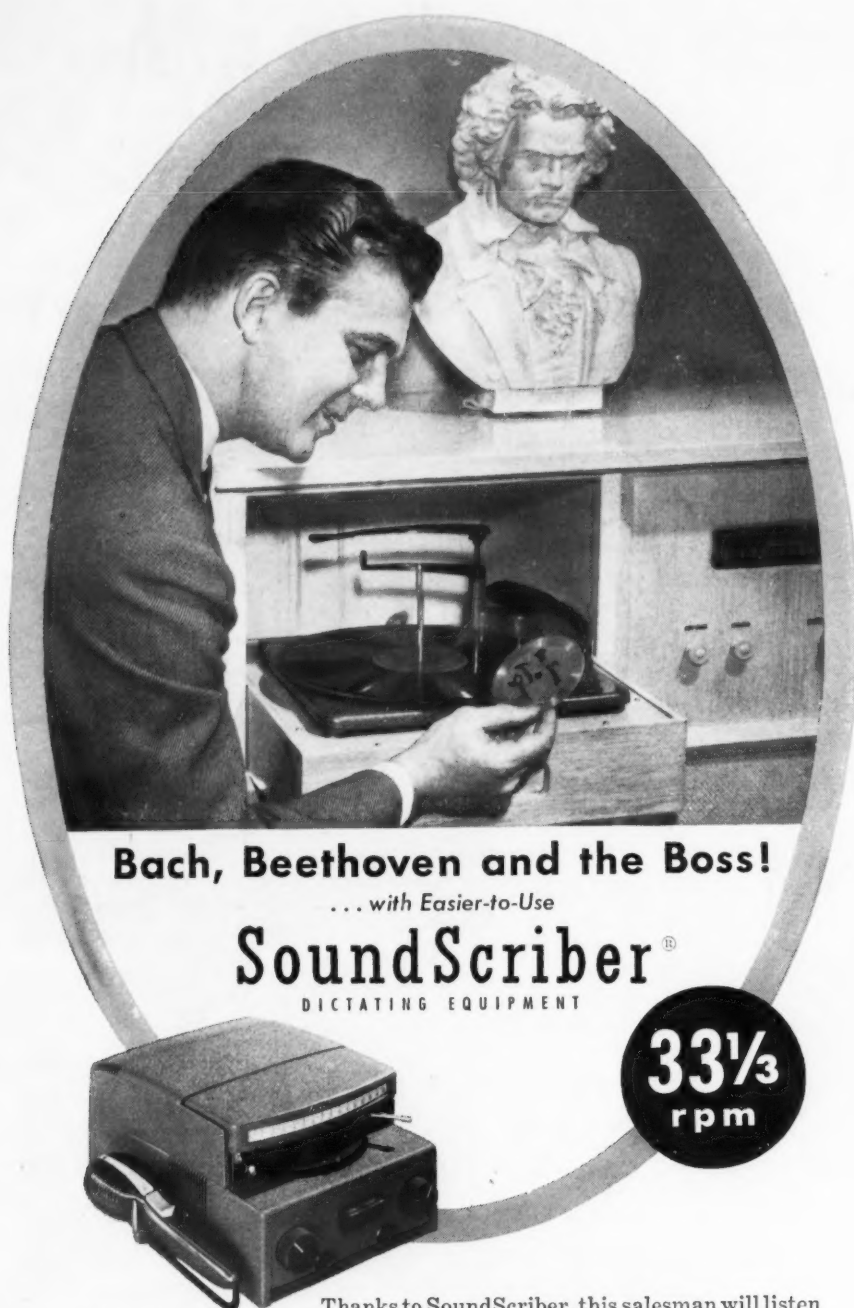
STURLON is non-conductive—makes steel chairs static-proof.

STURLON is non-corrosive—is unaffected by moisture, salt air, humidity or temperature changes.

•Sturgis STURLON-finished chairs, both executive and stenographic, are now being shown by your Sturgis dealer in three popular colors: metallic gray, green and walnut.



THE STURGIS POSTURE CHAIR COMPANY • STURGIS, MICHIGAN  
For complete information and the name of your nearest dealer,  
Write to The Sturgis Posture Chair Company, General Sales Office, 154 East Erie Street, Chicago 11, Illinois  
(Circle 34 for more information)



Thanks to SoundScriber, this salesman will listen to all three tonight. His prized recordings plus a pep message from the boss.

For SoundScriber alone offers a dictation disc that plays back on long-playing phonographs. One wafer-thin disc, no bigger than your palm, carries 15 full minutes of dictation, mails for a 3¢ stamp! Now you can conduct sales meetings, transmit confidential information or personal messages to traveling men with as much privacy as though they sat across your desk.

Like to know how this versatile, easy-to-use dictating equipment can make *your* field force even more efficient? Mail Coupon today!

#### Only SoundScriber Offers You:

1. Automatic On-the-Disc Indexing.
2. Two Arm Flexibility.
3. Mail-Chute Size Discs.
4. Lightest All-Purpose Machine.

The only dictation disc useable on long playing phonographs.

**SEND TODAY**

SoundScriber Corp., Dept. MM-4  
New Haven 4, Conn.

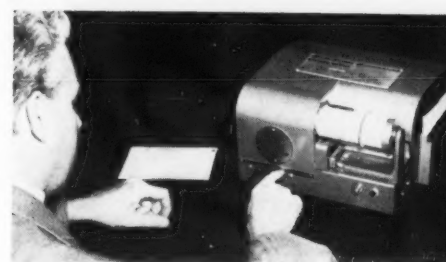
Send sample disc and literature.

Name.....

Address.....

(Circle 86 for more information)

## How to speed



A businessman flashes communications in "picture" form to another department or branch of his firm simply by pushing a button on a facsimile telegraph machine. Incoming messages are also received automatically.

## intra-office messages

It's not uncommon for a simple memo to take hours to complete a 100-foot trip between two departments or executive offices. For example, it's completely possible for a telegram to take more time to move within an organization to its addressee than it takes for the telegraph company to relay the message across the country. For that reason, most firms encourage their employees and executives to use the audio transmission facilities that are available.

Unfortunately, voice transmission is not always dependable. When the purchasing agent calls inventory control for stock-on-hand figures for several items he usually wants a *written* record to be delivered. If speed is important, the usual intra-office messenger system, funneling through the mail-room, is not satisfactory. That means someone has to interrupt his normal flow of work to "carry the mail."

Recently, a new miracle worker in the "inside" communications field has hit the horizon. Called Intrafax, it is a private facsimile telegraph system leased to customers for use within their organizations to speed intra-company communications in "picture" form. Installations range from a simple facsimile communications system between two users, to multiple transmissions serving a score of users through a central control unit.

The Intrafax machine is a small facsimile telegraph that takes up less

than a square foot of space on the user's desk (*see cut*). The sender simply places his communication on a metal drum and pushes a button. The machine does the rest automatically by rotating the material before an electric eye which flashes an exact image of it to the distant receiving machine.

Typewritten matter, drawings, sketches, signatures in pen and pencil, are reproduced equally as well as long-hand messages, and with the highest fidelity. The sending and receiving machines are identical and a single unit does both jobs. Moreover, messages of various sizes can be transmitted to a maximum of 8½ by 13 inches. They will take fairly stiff cards as readily as thin sheets. Wrinkles in the copy are effectively ironed out in transmission. The metal drum on the machine revolves at a speed of 360 revolutions per minute and will scan over 3½ inches of a page of copy in that length of time.

#### How Much Does it Cost?

Costs of Intrafax operation vary according to the number of individual units required and the wire mileage involved. For example, a basic installation of two machines operating over a distance of one mile or less leases for about \$54.00 monthly. Operating at normal speed they will handle 30 messages hourly. On this basis, 1200 messages can be transmitted in a five-day, 40 hour week—or about 5400 messages

methods



monthly at a cost of about one cent per transmitted message!

#### Various Uses Developed

One of the first to use the new equipment in the insurance field was the Aetna Life Affiliated Companies of Hartford, Connecticut. This installation is an example of the simplest type of Intrafax with two desk facsimile machines providing rapid inter-office communication between the home office and an affiliated company one-half mile away. In another insurance company, they're about to install the method for getting copies of insurance documents quickly from remote storage vaults. In this case, where full written details are essential, it is unnecessary to remove valuable papers and endanger them to loss since the equipment transmits an exact word for word copy.

Pan American World Airways headquarters office in Long Island City has a larger installation. The Intrafax center is located in the communications room of the airline on the ground floor. As urgent messages arrive by telegraph and cable, they are flashed to various departments and executives by the equipment. A total of 11 machines serve various floors in the headquarters building, and two machines are located in its New York offices about two miles away.

New applications for the machines are being developed almost every day. The Federal Reserve Bank of New York, for example, uses it to speed millions of dollars daily in fund transfers. Their system connects the bank with 15 large New York City member banks. In other cases, Intrafax is being used by banks to verify depositors' signatures on checks and to transmit checks in picture form.

A large New York department store is transmitting original sales slips from salesmen's order books directly to a distant warehouse several miles away. This is speeding up order deliveries to customers' homes, often saving several days in the handling process.

The ease of use and low cost of this system combine to give Intrafax a limitless potential.

For more information and free literature, Circle number 10 on the Reader Service Card.

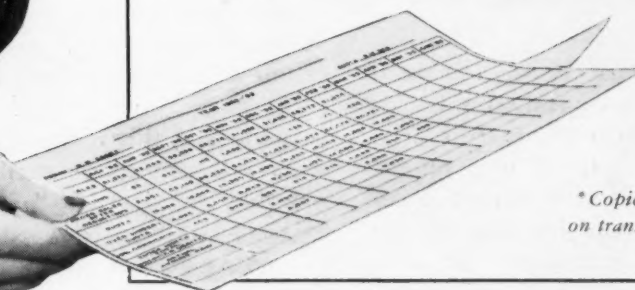
# ACCOUNTING REPORTS GET OUT FASTER WITH OZALID!



**Constant data written once! Variables added by different offices simultaneously! No errors! No rewriting! Copies distributed immediately!**

#### SAVE TIME, MONEY ON ACCOUNTING REPORTS! USE THIS OZALID SHORT CUT!

1. Send out OZALID "duplicate originals"\* (containing constant data) to departments, branches, field offices.  
**Step eliminates recopying constant data**
2. Have reports completed (filled in with variable data) returned to main office for reproduction with OZALID and distribution to management.  
**Step eliminates rewriting errors**
3. To make one consolidated report, strip in variable data from several reports onto a translucent original. Feed "composite" into OZALID machine for copies.  
**Step eliminates copying from separate reports**



\*Copies of original on translucent paper

The streamlined desk top Ozamatic makes copies up to 16" wide for accounting reports, invoices, purchase orders and other business forms from ordinary translucent originals. First copies are available in seconds, or up to 1,000 letter-size copies per hour at a cost of about 1½¢ each. Send the coupon for full details, or call the Ozalid distributor listed in the classified section of your phone book under Duplicating Equipment and Supplies.



Cut Copying  
Costs... use

# OZALID®

OZALID, Dept. MM-10  
General Aniline & Film Corp.  
Johnson City, New York  
Gentlemen: Please send me full information about your OZAMATIC machine.

Name.....  
Company.....  
Position.....  
City.....

Check the Application of Greatest Interest ☐ Accounting ☐ General ☐ Order Handling

Johnson City, N. Y. A Division of General Aniline & Film Corp. "From Research to Reality."  
Ozalid in Canada—Hughes Owens Company, Montreal

(Circle 41 for more information)

# Quality control in your office

THE TECHNIQUES THAT WORK IN THE PLANT CAN BE APPLIED TO OFFICE OPERATIONS

**Editor's Note:** While there is nothing complex or complicated about quality control itself, the subject cannot be handled in its entirety in a single article. Mr. Shelton has not attempted to outline a *modus operandi* for setting up a quality control program. Rather, he outlines what it is, what it can be expected to accomplish, and the results of his company's experience in the field.

■ We became interested in clerical quality control several years ago; long before a group had been formed to handle it. A man on the office management staff was given the initial assignment of investigating the work of other companies. He read books, contacted the national organization, attended a few conventions, and became acquainted with the two or three experts in our local universities. Within nine months he was able to report back to management on what he felt statistical quality control would do in our office.

I mention this only to indicate that, while some technical preparation is necessary, a company need not invest in a large staff to get a program under way. In our own company, we use only the part time services of one staff man to administer quality control.

## What is Quality Control?

The essence of quality control is a matter of finding a way to improve quality and reduce errors in a given

operation without spending an excessive amount of money for inspection. For example, in our order entry procedure, it would be possible to completely verify every bit of work by using additional clerks. Naturally, the cost would be excessive. And, even with 100% verification and inspection, errors would still creep in. The job of quality control is to reduce the investment in inspection and verification *without sacrificing quality*. More important—and this is the point that is often misunderstood—quality control not only is designed to keep errors at a minimum, but specifically attempts to improve over-all quality at the same time.

When we applied statistical quality control to our own order entry procedure, we were able to raise the quality level of the work coming to the verifying operation by 16 percent. At the same time, the verification effort was reduced by 11 percent! I don't have to dwell on the importance of accuracy on order entry. Because 35 departments in our office and factory may receive instructions from the various copies of this production order set, accuracy is of critical importance.

## How Quality Control Works

The major quality control tools used in effecting this quality improvement are a control chart and a sampling plan. The control chart (page 36)

By Fred E. Shelton, Jr.  
Office Manager, The Standard Register Company

takes a positive approach by indicating the amount of good work performed rather than the number of errors committed. This approach strengthens the psychological benefits to employees for we place the control chart where all employees of a department may see it.

Here's how the chart works. A vertical scale along the left margin of the chart is the measure of the good work performed — the percentage of efficiency. The horizontal scale along the bottom of the chart is the measure of the time intervals (days in this instance) of the sampling procedure. The solid line shows the current average quality level for the operation, and a dotted or broken line indicates the control limit, or the "take action" line. Plottings are made daily from samples. When a sample falls below this line, investigation of the operation is immediately begun in order to bring to light the cause of the lowered quality. This permits corrective action.

The sampling plan is based on the values of four quantities which are called the operating characteristics of the plan. These are:

1. The quality of the work that is acceptable.
2. The quality of the work that is unacceptable.
3. The risk of verifying work that is of an acceptable quality.
4. The risk of not verifying work of

(Continued on page 36)

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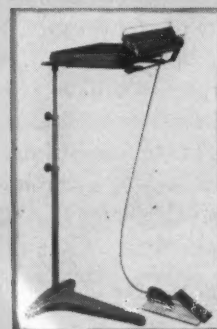


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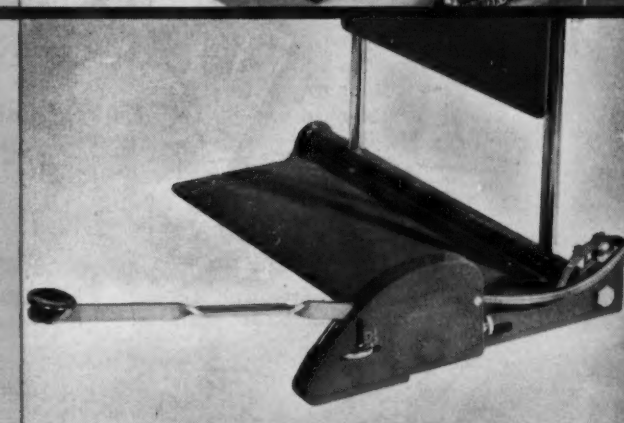
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Reading material is easily inserted . . . it rolls through the platen rollers as in a typewriter. A stenographic notebook or group of papers, pamphlets, or other bulky material can be easily inserted.

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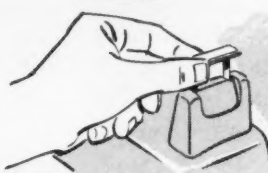
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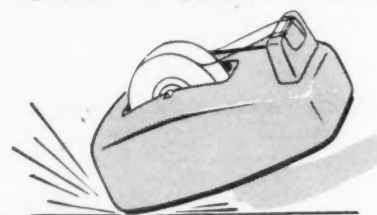
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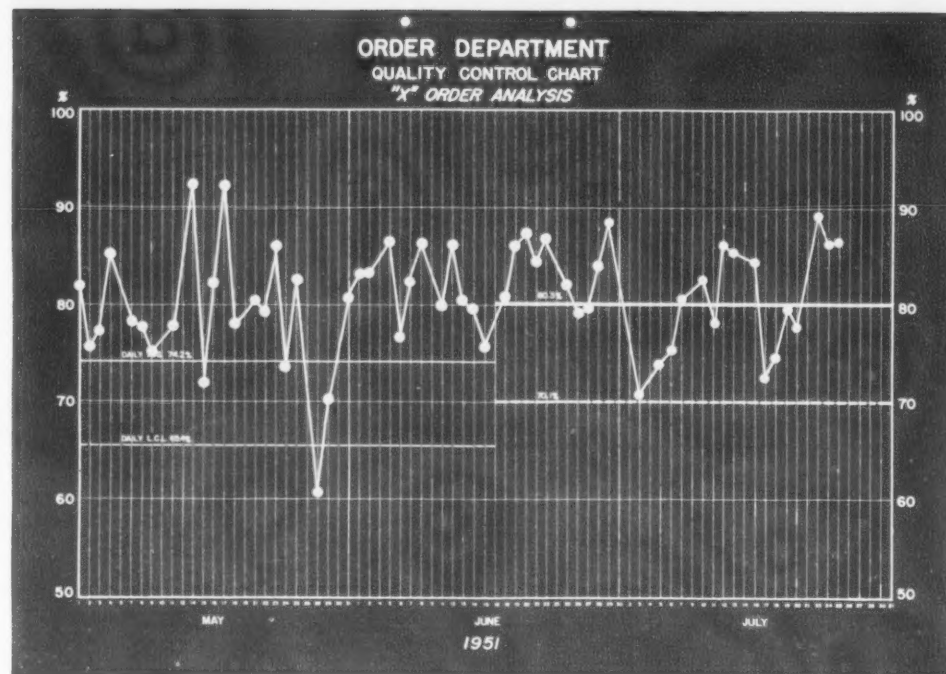
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(Circle 46 for more information)



This control chart indicates the amount of good work performed rather than the number of errors committed. The vertical scale on the left margin indicates percentage of efficiency, and the horizontal scale indicates the days of sampling.

unacceptable quality.

There are many kinds of sampling inspection plans. The plan that is best for one operation may not be the best for another. The chief problem in sampling verification is to choose the plan that is best suited to your particular operation.

The ingredients of a good plan are (1) regular sampling, (2) random selection, and (3) thoroughness. The inspectors, who are employees in the department being controlled, are under definite instructions to take the samples at regular intervals. They do not take samples at the same time each day, but they are instructed to be sure that each group of work units processing through the department is sampled. While employees know their work is being inspected, the inspection is done at random, so they have no idea at what moment their individual work will be examined.

## Using the Sample Results

The control chart reflects the over-all efficiency of the department. Because it is posted openly, employees are constantly aware of the department's progress.

The results are also tabulated for individual employees. The department manager is given a card for each em-

ployee which permits a comparison of the individual's performance with the over-all performance of the group. In addition, and most important, it indicates *what kind* of errors the individual is making. This gives the manager an opportunity to take corrective action when necessary.

## The Results of Quality Control

A good gauge of the value of quality control can be obtained from our experience in the following departments:

In our *mailroom*, we process thousands of pieces of mail addressed to our field organizations. These groups of sales and service representatives are located in several hundred different geographical locations. Accuracy is vital to avoid any quantity of mail being forwarded to incorrect destinations. Control charts and sampling techniques have brought the quality level of this operation to 99.7 percent. At the same time, the inspection effort has been reduced by 45 percent!

In our *accounts receivable department*, instead of our former 100% inspection of invoices, we introduced quality control. We have reduced the time spent in verifying these invoices by 47% and, at the same time, reduced our operating budget without lowering the quality level.

(next page, please)

methods



In our *customer records department*, where incoming sales orders are handled, we translate certain items of information from alphabetical form into a numerical code. Errors will affect the operation of six other departments in the office. By using quality control, the accuracy of one basic operation was raised from 86.2% to 95.9% in three weeks time.

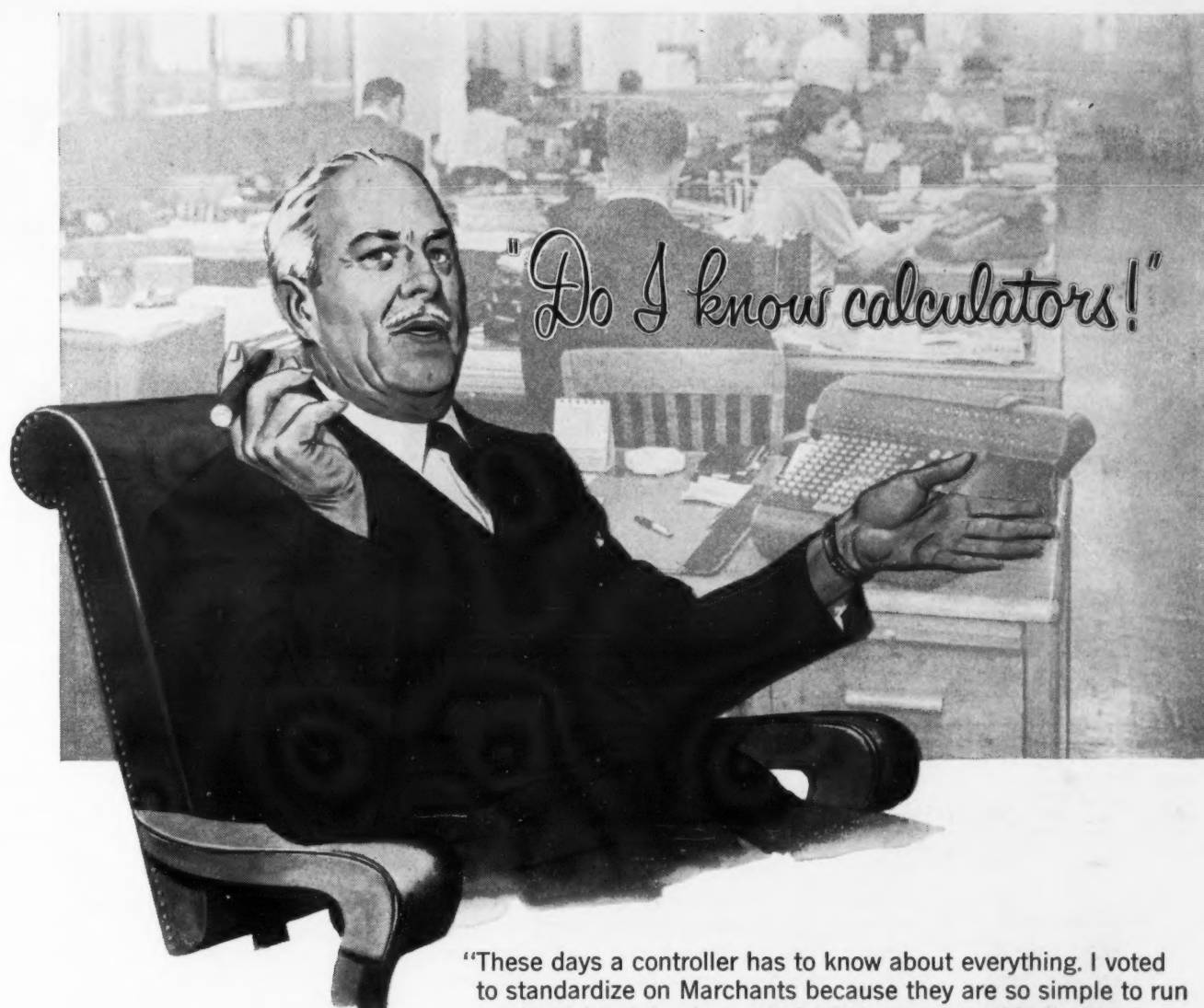
#### Experience of Others

At least two other companies with whom we are acquainted are using quality control to assist themselves in the management of their office operations. Prudential Life Insurance Company of America has reported that the application of these methods in their offices has resulted in the percentage of errors being decreased by from 50% to 90 percent. They also report that the elimination of certain 100% checks has been effected, but the quality of the work has continued to improve and there has been created a consciousness of quality that did not exist before.

General Electric Supply Company reports that in applying quality control in the Stock Record and Billing Sections of their Newark office, they have come to the following conclusions with regard to its benefits:

1. Worker interest in quality has definitely increased.
2. The quality of work has been raised.
3. Prompt discovery and investigation of chronic errors has permitted "spot" training.
4. The amount of inspection or checking, where done before on 100% basis, has been reduced to a 50% basis or less.
5. *Quantity* of work output has been increased along with quality.

We at Standard Register believe that Quality Control is essentially a combination of common sense and an organized approach to the measuring and checking of the quality of work. In other words, quality control methods provide a scientific means of immediately determining when quality has deviated from its normal operating level. It is a managerial tool that our supervisory and rank-and-file employees can advantageously use in keeping their operations above average. Its psychological advantages are enormous, and it saves us money. *m/m*



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## New Frigidaire Water Coolers combine Economy and Convenience!



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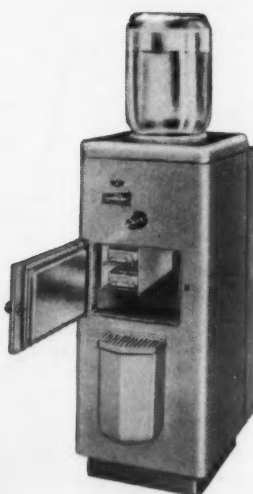
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(Circle 60 for more information)

# How to use your posture chair

THESE EASY-TO-FOLLOW RULES WILL ENABLE YOU TO GET THE MOST FROM YOUR POSTURE CHAIR



The advantages of posture chairs are proven every day by people who sit in them. In order to derive the fullest advantages from a posture chair, it must be adjusted correctly. In fact, an improperly adjusted posture chair can be uncomfortable.

In using an ordinary chair, one is likely to sit forward on the seat in a slouching position. (See cut I.) If a posture chair is incorrectly adjusted, the same position results.



### How to Test Adjustments

The correct seat height is easy to judge. When a person sits in a posture chair with his feet flat on the floor, the angle of the shin and the thigh should approximate a right angle. The front of the seat should not press into the thigh, back of the knee. When the proper height is achieved, a folded piece of paper or cardboard inserted between the lower thigh and cushion should offer only a slight resistance to removal. (See cut II.)

### Adjusting the Backrest

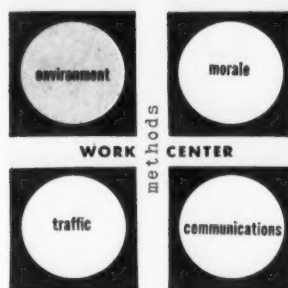
After the seat has been adjusted for height, the middle of the backrest should come slightly above the small of the back. This point may be located by allowing the arm to hang loosely from the shoulder; the elbow will then be about even with the small of the back. Make certain that the bottom of the backrest does not ride on the hip bone, or that the top does not interfere with free shoulder movement. (See cut III.)

Allowing for slight differences demanded by some individuals, these positions will assure you getting the most from your posture chair.

For more information, Circle number 25 on the Reader Service Card.







# A conference room is not a luxury

OPEN YOUR "BOARD ROOM" FOR CONFERENCE USE WITH THESE ARCHITECT-CONCEIVED INNOVATIONS

To a great many firms a board room connotes "luxury". Generally, it conjures up a vision of precious space that is expensively decorated and seldom used.

A case study in how to put a board room to work without sacrificing its prestige is offered in the recently-opened New York offices of Rayonier, Inc. Clever design has produced a multi-purpose room with such a functional use of space that it represents economy rather than expense.

Early last year, Rayonier, a leading manufacturer of chemical cellulose, was faced with the task of finding new

quarters to centralize activities of its main office. The staff had outgrown its original office space in Forty-Second Street's Chanin Building to the extent that it was doing business on two levels—25 floors apart.

## New Executive Headquarters

The decision to lease adequate space in the new Chrysler Building East, a block away, led to another decision—to break with the past and plan entirely new executive headquarters for maximum efficiency and best utilization of high-cost space.

Because of the character of the office

operation, areas for executive sessions, sales meetings and advertising were specified. Alloting floor space for these separate activities posed a problem for the New York architectural firm of Cordes, Bartos and Minhos, which they solved by the creation of a "multi-purpose room".

## The Space is Small

Not only have the architects conserved space, but they have created unusual spaciousness in a fairly limited area. It's a comparatively small room—only 25 by 16 feet—that looks big despite a 15-foot polished walnut table



The new board room of Rayonier, Inc. is a study in utility. Designed by Cordes, Bartos and Minhos, New York architects, the room has hidden facilities to permit its use for a variety of sessions including sales and advertising meetings. The secret is the functional wall (background), a novel unit with hidden qualities. Behind the wall are two soundproofed private phones. For all its apparent lushness, the 25 foot by 16 foot room can do double duty as Board of Directors room and general conference room, and more than pays for itself in functional application.

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1,000

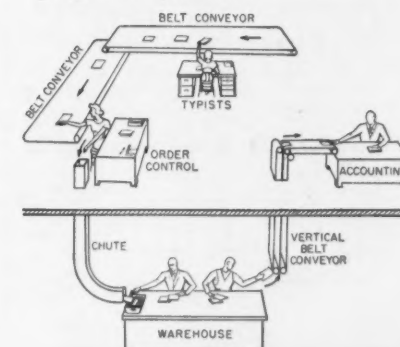


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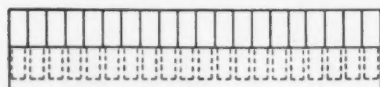
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(Circle 51 for more information)

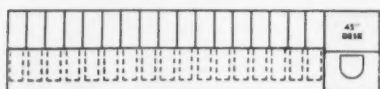
# ART METAL SPEED-FILES CREATE LARGE SAVINGS IN FLOOR SPACE



**LOW overall dimensions provide maximum filing capacity in minimum space**

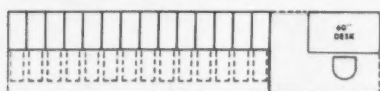


20 Conventional 4-drawer Filing Cabinets—140 Sq. Ft. (Capacity: 1,808 Filing Inches).



17 Speed-File 4-drawer Filing Cabinets—119 Sq. Ft. (Capacity: 1,808.80 Filing Inches).

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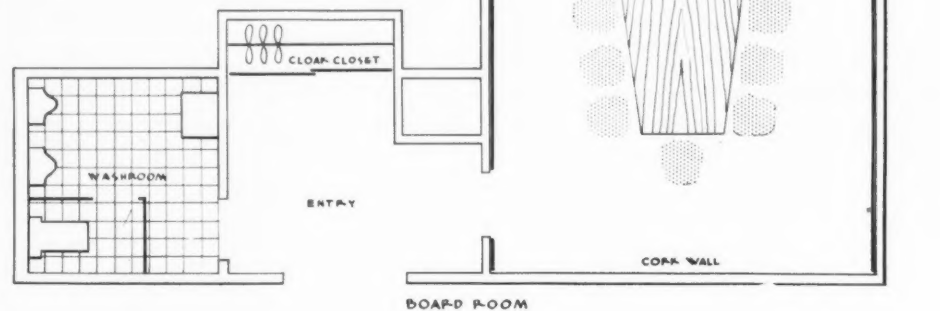
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**THERE'S AN Art TO BETTER FILING**

(Circle 84 for more information)

The ingenuity of the architects is demonstrated in this plan. In a minimum of space—the board room itself uses only 400 square feet—a self-sufficient conference area is provided. Note that this Work Center is all "inside space". Yet, thanks to skylight-like illumination and air conditioning, the relatively small quarters feel open and spacious.



that accommodates 16 men. The reason: simplicity of decor.

There is an unbroken expanse of walnut paneling on three walls; the fourth is occupied by a large "screen" of the same material framed in plaid draperies. The illusion of expanse has been enhanced further by a complete absence of ornamentation or hung pictures.

The concave screen, which masks two unwanted window openings, holds the key to the room's multiple use. It is a novel fixture of many functions.

The architects designed it to provide a focal point in the unornamented room; it also permitted them to offer space for tiny telephone alcoves, com-

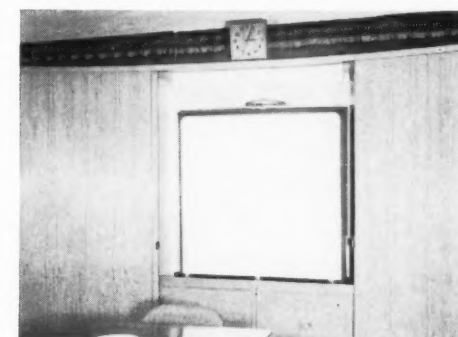
plete with desk and pad, and sound-proofed with acoustical tile to allow acceptance of calls without interrupting a meeting. They fill a much-needed conference room want.

## Multi-purpose Design

Because of carefully matched grain, two sliding doors (*see cut*) in the center of the curved screen appear as a section of the wall when closed. Behind the doors is a built-in cabinet with storage space below for stationery and projection equipment, and a counter above fitted with a pivoted display board and a roll projection screen. The depth of this counter forms a niche that is illuminated by concealed lighting fix-



The screen disappears and bulletin-type boards appear. These provide the means for an "easel presentation" without need for setting up props at the last minute.



A flick of the wrist sets up a projection screen for slide or film presentations. The storage area below has ample space for stationery, conference room material and projection equipment.





One of two telephone alcoves behind the flaring ends of the concave screen. Fitted with desk and pad, and soundproofed with acoustical tile, the units provide a neat solution for taking a call without leaving the room.

tures. The facilities for presenting visual displays make the room suitable for any meeting where films, slides, charts or illustrative material are necessary.

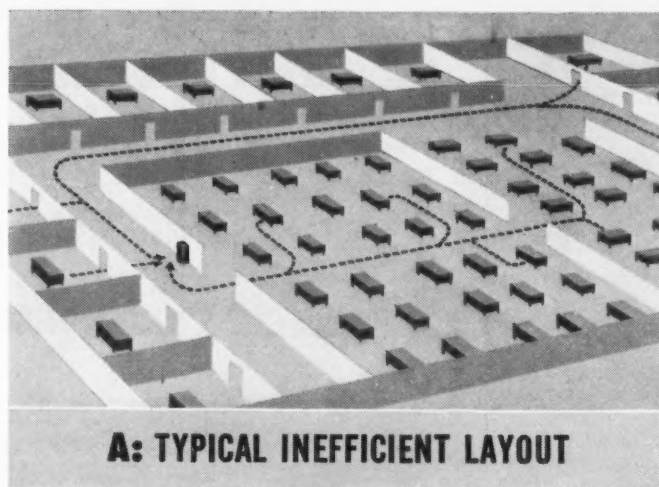
The lighting arrangement also is keyed to the room's versatility. Ceiling spots provide a living room atmosphere for informal sessions. When a more diffused light is required, a 6 x 18 foot "skylight" unit placed directly over the conference table, gives a flood of flat, shadowless light. This light creates the illusion of openness in a "sealed" air-conditioned room, and precludes possible glare from the polished table.

The flat quality of the light is due to the large illumination source plus diffusion by the panels of white translucent glass. In addition, the stroboscopic effect of the banks of fluorescent tubes behind the glass has been cut in half by alternating the "off-on" cycles to produce a flickerless, steady illumination for the utmost eye comfort during long business sessions.

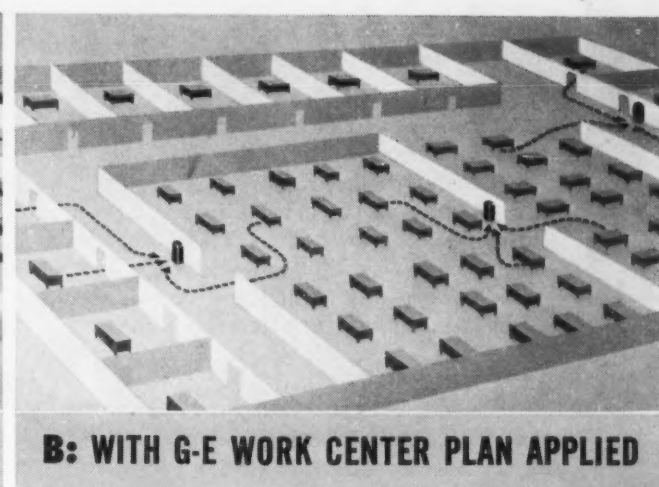
The use of heavy carpeting, draperies and acoustical plaster effectively dampens noise to the extent that conversations cannot be overheard outside the room. Although "sealed", it's never a smoke-filled room. A special ceiling exhaust, part of the air conditioning system, is designed to handle extra loads to assure a clear atmosphere. m/m



**G-E Work Center Plan applies science to water-cooler placement!**



**A: TYPICAL INEFFICIENT LAYOUT**



**B: WITH G-E WORK CENTER PLAN APPLIED**



## WATER COOLERS

*can pay  
for themselves  
many times over*

**RULE OUT COSTLY PLANNING ERRORS!** The first scientific study of water-cooler layout, made by General Electric last year, reveals costly misconceptions that creep into water-cooler placement in offices and plants. For example, it is often false economy to use one large cooler instead of two smaller ones!

**TYPICAL LAYOUT OFTEN PROVES EXPENSIVE.** Layout "A" requires the average worker to travel 130 feet to the nearest cooler. Figuring four round trips a day, 240 days a year, and 300 feet per minute walking-time, this means that each employee walks 47 miles a year that account for about 14 hours of lost time and, at \$1.50 per hour average, nearly \$21.00 worth of work the employer pays for but doesn't get.

**MONEY-SAVING "WORK CENTER PLAN."** In layout "B," the average distance to the cooler is 60 feet, comparable traveling time about 6½ hours, so you save 7½ hours, or \$11.25 per employee. Multiply by 60 (number of employees) and the employer saves \$675 a year—more than enough to pay for the added G-E Water Coolers *before the first year is out*. In five years, he saves a total of \$3,375! And his investment is safeguarded for a full five years by G.E.'s generous Five-Year Protection Plan.

**GENERAL  ELECTRIC**

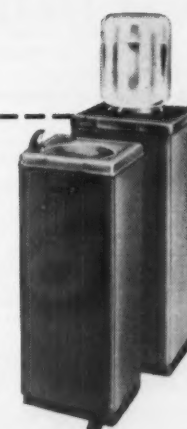
Free study shows you—in black and white! Also provides valuable, easy-to-use planning tools. Send in the coupon today. No obligation!

**HOW MUCH CAN YOU  
SAVE YOUR EMPLOYER  
with G-E Water Coolers and  
the G-E Work Center Plan?**

General Electric Company, Dept. MM-2  
Air Conditioning Division, Bloomfield, New Jersey

Please send me the complete guide to efficient  
water-cooler placement.

NAME .....  
COMPANY .....  
ADDRESS .....  
CITY ..... COUNTY ..... STATE .....

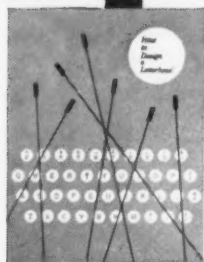


(Circle 59 for more information)

Does your letterhead....

## Build Prestige?

An important part of the impression made by your typewritten salesmen — your letters — comes from the paper they're on. If your letters are important — as of course they are, or why write them? — then the paper that carries them needs the *feel and fact of quality*. You can get this with Parsons fine writing and bond papers. They're made with *new cotton fibers*.



© P.P.C. 1953

Find out for yourself. See how a leading designer, Lester Beall, thinks letterheads should be made. Our portfolio of ten Beall designs, on three Parsons papers, also gives his ideas on "How to Design a Letterhead" — the portfolio's title. It won the distinction of acceptance by The American Institute of Graphic Arts' show, "Printing for Commerce, 1953". Write today on your letterhead for your *free copy*. Parsons Paper Company, Department 47, Holyoke, Massachusetts.



(Circle 40 for more information)

the  
very **ID**



(look for it!)

The "ID" symbol on a desk — pridesmark of honest craftsmanship — is your assurance of quality and durability and utility, in wood office furniture that is friendly to budgets.

Look for the "ID" symbol in the middle drawer. It identifies an Indiana Desk. It is your assurance of enduring satisfaction.

If you don't know the name of your nearest Indiana Desk dealer, please write us for information.

**indiana desk co.**  
JASPER, INDIANA • U.S.A.

(Circle 54 for more information)

## FIVE BOOKLETS TO HELP \$1 YOUR SALESMEN SELL!

Send \$1.00 with your name and address attached to this ad and mail today for this set of handy booklets on selling techniques. Only one set to a customer.



**A SHORT COURSE IN SALESMANSHIP** by J. C. ASPLEY. Packed with helpful suggestions on selling fundamentals. Over 300,000 copies sold.

**SELL BY GIVING** by JAMES T. MANGAN. A remarkable philosophy and approach to selling which simply cannot fail. Over 200,000 copies sold.

**THE KNACK OF SELLING YOURSELF** by JAMES T. MANGAN. Every salesman must sell himself before he can sell anything. This book blueprints the way. Over 300,000 copies sold.

**HOW TO SELL QUALITY** by J. C. ASPLEY. Tested methods to overcome price objections and sell a quality product in a buyers market. Over 500,000 copies sold.

**STEP OUT AND SELL** by W. E. HOLLER, former sales manager for Chevrolet. An inspiring book that packs a real punch. Over 250,000 copies sold.

Each booklet averages 64 pages, size 4 x 6". Practical, down to earth, and packing a wealth of help, millions of these booklets now used in training by some of the largest companies in all lines of business.

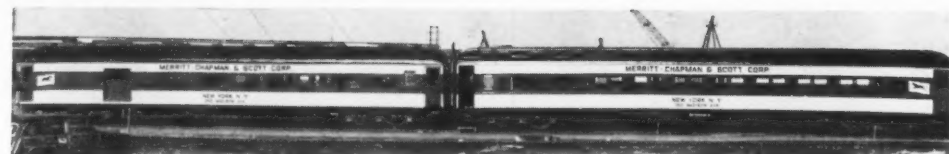
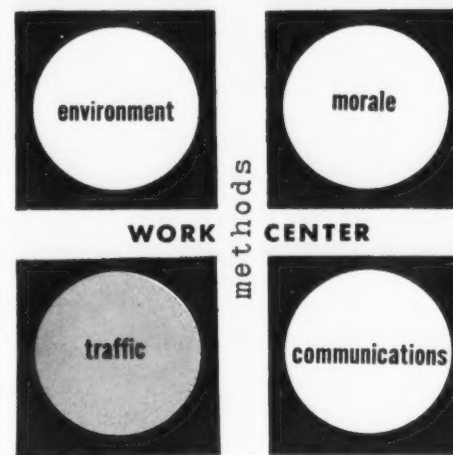
**DARTNELL**

MANAGEMENT TRAINING AIDS

4658 Ravenswood Ave.

Chicago 40, Ill.

(Circle 81 for more information)



The new two-Pullman office of Merritt-Chapman & Scott on the site of a construction job.

When Merritt-Chapman and Scott, a large construction firm, starts a new building project, not the least of their problems is the creation of an office on the site of the job. Formerly, it was necessary for them to build and furnish a complete work center before construction could commence. Now, using their two-Pullman mobile office, they roll to the location of their project, and are ready for work upon arrival.

### Old Pullman Cars the Answer

R. I. Senn, Merritt-Chapman and Scott's project manager, conceived this idea some time ago, but he could not find a practical method of outfitting the cars until the Review Company, office equipment retailers in Savannah, Georgia, suggested the mobile office be equipped with modular furniture.

The Review Company completely furnished the two renovated Pullman cars with floors, tile walls, ventilating-type heating registers, and flush-type fluorescent fixtures. Also installed were hot and cold running water, air conditioning, and soundproofed ceilings. A complete intercommunication system was developed, plus a switchboard for handling outside calls.

### Private Offices and Bedrooms

One car houses the offices of the project manager, the office manager, and

# Office processing

the office and clerical assistants. The other car is fitted to accommodate the chief engineer and his assistant, and a hospital unit complete with x-ray apparatus and nurse's quarters. The living quarters reduce a high executive expense factor, and provide key men with better-than-average accommodations.

The outside of the cars are painted red and buff, the standard colors of Merritt-Chapman and Scott, and are decorated with the firm's "flying black horse" symbol. Although the cars are not yet streamlined, the company plans to do this shortly by rounding off the tops and "skirting" them in the same fashion as the aluminum streamliners.

### Ample File and Work Space

The Review Company was faced with the additional problem of providing space for reading plans. The project manager's desk and the engineers' desks, therefore, were fitted with thirty-inch auxiliary L-shaped tops on which the plans may be read with ease.

All the desks in the mobile office have visible record arm slides for information which must be readily available. Normal filing of correspondence and other material is done in standard verticle files. For storing material, the auxiliary tops of the desks are removed

methods



# on wheels on-site paper work



The interior of one of the cars shows compact work areas and efficient utilization of space.

—revealing horizontal filing sections in which records may be placed.

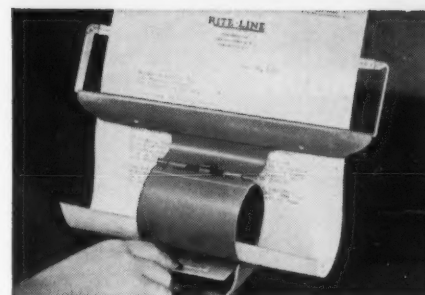
With this mobile unit, the cars may be backed on a siding at the construction site and the project is immediately in operation. This saves at least 30 days set-up time in building and equipping an office (which, incidentally, is

later torn down). Since the type of construction jobs done by Merritt-Chapman and Scott usually have a completion deadline with penalties for extension, the time saved by the rolling office can mean the saving of thousands of dollars in customer imposed penalties or overtime pay. m/m



The project manager's modular furniture has 30-inch deep desk top on which plans are read.

april 1953



## RITE-LINE COPYHOLDER

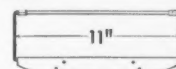
Promotes Accuracy - Increases Production

PRICE INCLUDING  
NEW TELESCOPIC  
EYEGUIDE

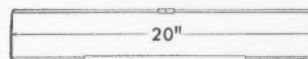
**\$1775**  
PLUS TAX

## TELESCOPIC EYEGUIDE

Accommodates all widths of copy from a machine tape to 20 inches.



EYEGUIDE CONTRACTED



EYEGUIDE EXTENDED

**FREE TRIAL OFFER** Write, asking us to send you a RITE-LINE Copyholder with the understanding you may return it without charge within ten days.

**RITE-LINE CORP.** 1025—15th Street, N. W.  
Washington 5, D. C.  
(Circle 78 for more information)

## CHART-PAK USED BY AMERICA'S BEST MANAGED COMPANIES

CHART-PAK AND EXCELLENT MANAGEMENT

330

43.9%

CHART-PAK is now being used by 43.9% of the 330 companies whose management practices are rated as excellent by the American Institute of Management.

These companies appreciate the speed, economy, and professional results achieved by the use of CHART-PAK pre-fabricated materials for making a wide range of charts and layouts.

Every day more and more excellently managed firms are discovering the many advantages of the CHART-PAK Method.

Write for free descriptive bulletins on the modern way of making charts depicting sales, production cost, credits, collections, and other business trends.

### ATTACH TO YOUR LETTERHEAD

Please send me complete information on:

- Columnar & Bar Charts
- Office Layouts
- Organization Charts
- Pictographs

**CHART-PAK, INC.** 104-C Lincoln Ave.,  
Stamford, Conn.

(Circle 79 for more information)

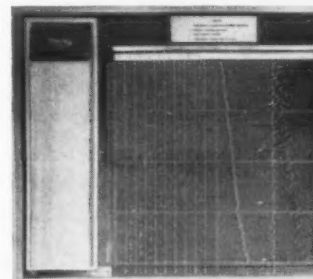
This is an executive —  
fussing with  
details a clerk  
should be handling!

How many extra hours do your department heads spend searching for the many tiny details that make up the all important picture of a departments overall operation.



The answer to this problem — as  
thousands of others have found — is  
**PRODUC-TROL**

Produc-Trol is a visual control system that gives you facts, automatically compared and analyzed, at a single glance. Whether it's Order Control, Inventory, Parts Available for Assembly, Sales Statistics, or one of the other many and varied applications, Produc-Trol eliminates the time-waste and inaccuracies that hamper executive decisions. Send the coupon today — let us show you how Produc-Trol can save time and money — and increase efficiency in your entire operation.



## WASSELL ORGANIZATION, INC.

Westport 3, Connecticut

I'm interested in Produc-Trol for

Name \_\_\_\_\_  
Title \_\_\_\_\_  
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**PRODUC-TROL IS BEING USED EXTENSIVELY FOR CONTROL OF:**

- Purchase Orders
- Parts Available for Assembly
- Parts in Process
- Manufacturing Orders
- Maintenance
- Traffic
- Sales
- Personnel
- Dispatching
- Machine Loading

**"Effective Tools for Effective Management"**

(Circle 31 for more information)

## Time For An Overhaul?

Take time-out for an unbiased look at your forms-writing system. You may be in for a very pleasant surprise!

During the last few years many new techniques and methods offer faster, cleaner, easier ways to write forms. A quick analysis of your system may suggest a way to save hundreds, and perhaps thousands of dollars annually.

That explains why so many companies—the small ones, medium, and the very largest, such as Chrysler Corporation, Admiral Corporation, Ford Motor Company and the Chesapeake & Ohio Railroad—have switched to the use of continuous forms with Repeat-O-Pak floating, reusable carbon paper. They're saving money every time they write a form—and getting cleaner, sharper carbon copies.

For a free analysis of your forms-writing system with no obligation, just send us a sample of your forms, your estimated annual usage, and the name of your forms-writing equipment.

# Repeat-O-Pak

**STANDARD MANIFOLD COMPANY** Dept. A952  
Carbon Papers • Inked Ribbons • 333 W. Lake St. • Chicago, Ill. • Offices in  
Principal Cities • In Canada: Budge Carbon Paper Mfg. Co., Ltd., Montreal 3, Quebec.

\*floating carbon paper for continuous forms used on all kinds of forms-writing machines  
... I. B. M. and Underwood Formwriters... Moore Carbon-Saver and Uarco Adapters.

(Circle 35 for more information)

## Win \$25.00 for each Thought Starter Published

Management METHODS will send you a check for \$25.00, and by-line you and your company, for each Thought Starter you send us that we accept for publication.

Material should explain how a better business method increased productivity or saved money in your firm. There is no limit on the number of Thought Starters you can send us. We urge you to send us illustrations whenever possible.

Address material to:

### Thought Starters

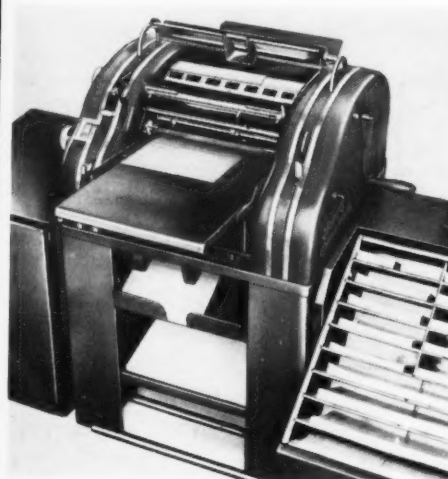
Management METHODS Magazine  
141 East 44th Street, New York 17, New York

## clippings

NEW LITERATURE AND PRODUCTS IN THE EDITOR'S MAIL

### Unique duplicating machine for systems applications

A new automatic spirit duplicating machine is being presented in the United States. It eliminates the need for blockouts and variable strips. It transfers columns and lines both vertically and horizontally. It prints one line at a time and can be positioned on any part of the copy. Adjustable stamping devices are built in the drum of the machine. An electronic optic



allows for easy adjustment. Copies are delivered in front or back and an electronic thyatron controls speed of machine. Automatic increase of fluid feed is provided when printing pressure is increased. Limitation of fluid feed is also automatic to correspond with paper size. Micro registration of master is assured. Copies (sizes 4" x 4" up to 18" x 80") can be obtained in five colors in one operation.

The machine is useful for parts ordering, purchasing-receiving, invoicing, shipping, payroll and bookkeeping methods.

For free literature and prices, Circle number 27 on the Reader Service Card.



### New calculating machine for solving interest problems

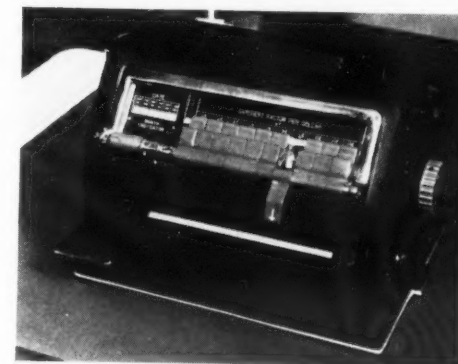
A revolutionary type of calculating machine is now being manufactured exclusively for interest calculations. It supplies the correct final answer in addition to a wide range of interest factors together with the elapsed number of days between any two given dates—eliminating the need for interest tables, factor charts or scratch

pad computations, regardless of the given period of time or interest rates.

Thoroughly tested by the Bureau of Internal Revenue, it has proven to be 100% accurate in all cases with savings of 70% to 90% of employees' time. In one case, it produced the correct answer to a complex and complicated interest problem in 10 minutes, while an experienced employee using interest tables and other interest factor schedules took exactly one hour to solve the same problem. In another instance, it computed the correct answer to a "test" problem in one minute and ten seconds, while an experienced employee solved the problem in 14 minutes, counting the time used to correct two errors.

The machine is simple to operate, and no training is required. The most inexperienced employee can operate the machine in a matter of minutes.

The calculator is available with a pre-selection of twelve suitable and interchangeable interest rate registers for a variety of business calculations. All models



are compact in size, making them adaptable for daily desk work, and are light in weight so that they may be easily moved about the office.

For more information and prices, Circle number 9 on the Reader Service Card.



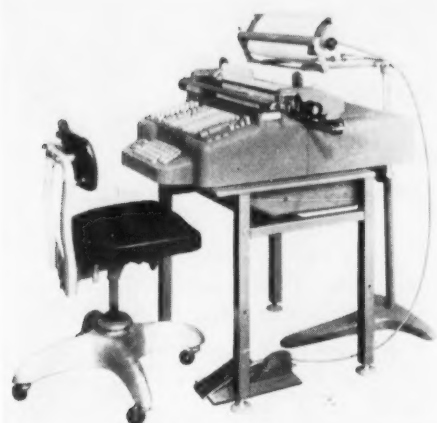
### New device adapts copy holder for various machines

Realizing a definite need for reading equipment to accommodate various bookkeeping and accounting requirements, a manufacturer of copy holders has recently developed a new pedestal-type unit.

This pedestal combination is especially

methods





useful where the work of the operator necessitates the use of both hands. The pedestal is equipped with a foot treadle for line spacing allowing complete freedom of the hands.

The pedestals are for use with such office business machines as Burroughs, Moon-Hopkins, Elliott Fisher, Pollard Alling, National Cash Register and IBM Key Punch as well as the typewriter.

The copy holder holds the material in a natural reading position, in back of the billing machine, accounting machine, or typewriter.

For more information, prices, and free literature, Circle number 2 on the Reader Service Card.



### Carbon copy sets for single, double, multiple pages

A revolutionary office aid has recently been introduced that will cut both time and cost in the preparation of carbon copies in large and small offices.

The product is designed to completely eliminate the handling of messy loose carbons, thereby helping to attain peak efficiency wherever carbon copies are required.

It consists of one or more sheets of scientifically selected carbons affixed by a perforated stub to one or more sheets of sulphite bond, thus assuring easy handling plus precision alignment.

To use, the typist merely places the letterhead on a form and inserts it in the machine. After all necessary typing has been completed the original is separated from the form while at the same time the first sheet under the carbon is snapped out, producing a sharp clean copy of the original. It is then ready to produce four more copies.

The product is available in the follow-



Many a system is figured alone. But once in a while a problem comes up that needs *more* professional noodling than one head can give it, and even a "veteran" has to come up for air. The systems below were worked out with the help of a man from Moore Business Forms. Experience he had picked up in other situations made it easy to design constructions that did the job quickest and best. Results were definite improvements over what "had been."

## INVENTORY COUNT CARD

### Pump Manufacturer



3-part Speediset

### The Problem:

Due to large scope of production, inventory-taking was always a touch-and-go problem, chiefly because reports were needed fast. The system involved putting a card in material bin; collecting; processing by Production Control (total 3 weeks); then it was sent to Tabulating and punched; reports were tabulated (3 weeks). It took a good 6 weeks to get reports.

### The System:

3-PART SPEEDISET: Part #1 to Tabulating for pricing. Then IBM cards are punched for recapping and Inventory report. Part #2 to Production Control for processing and reconciling. Part #3 (cardboard) remains in bin.

(Circle 45 for more information)

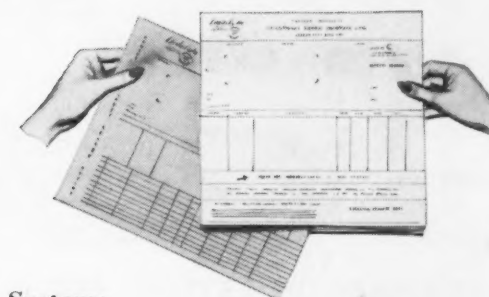
(ADVERTISEMENT)

**Savings and Gains:** Inventory pricing and recapping are done in 3 weeks instead of 6. Insures better control, by having material always identified with Part #3 in bin. Transcribing errors are avoided because 3 records are produced in 1 writing.

## PURCHASE ORDER—RECEIVING RECORD

### Food Processing Machinery Manufacturer

9-part Continuous Interleaved Form  
featuring Hectograph-master application



### The System:

9 COPIES AS FOLLOWS: Purchase Order; Receiving Record (Hectograph-master); Slip Sheet (removed prior to typing); Vendor Acknowledgement; and copies for these activities—Purchasing, Office, Planning, Cost, Stock Room. These are available for immediate distribution as a result of multiple-part speed stationery.

When the Purchase Order is issued, Copy #2 (master for the hectograph) is filed until deliveries are received; then new information is hand-recorded on it, and 4 copies are duplicated and forwarded to departments concerned.

**Savings and Gains:** Better control through *simultaneous writing* of Purchase and Receiving forms. The system eliminates filling out separate Receiving Records in detail for each delivery; facilitates "matching"; gives complete check on deliveries.

Yes, it's still true that—*two heads are better than one*. Often an "outsider" has a suggestion worth consideration. The fact the Moore man has been in and out of so many systems ought to hold some additional measure of advantage. Incidentally, the Moore people will send you gratis—for your consideration—interesting samples of systems worked out in your line. When encircling the number on the card, write in the kind of operations you're most interested in.



## BIND YOUR OWN SHEETS OR BOOKLETS

with the **NEW Improved**  
**TAUBER PLASTIC BINDING KIT**

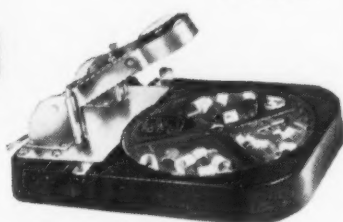
Plastic bind any typed or printed reports, presentations and photographs in seconds. Bind right at your own desk at practically no cost.

The Tauber Plastic Binding Kit consists of a beautiful punching machine and over 150 colorful Tauber Plastic Tubes.

TAUBER-TUBE  
PERMANENT

**\$11.90**  
F.O.B.  
N.Y.

**FOUR WEEK  
MONEY-BACK  
GUARANTEE**



**TAUBER PLASTICS, INC.**

200-M HUDSON ST. • NEW YORK 13, N. Y.

(Circle 33 for more information)

## GET THIS 44-PAGE BOOK!



Tells how to

## CUT COSTS—SAVE TIME ON FLOOR MAINTENANCE

Explains the different characteristics, uses and installation of every type of floor. Tells how to recondition old floors. Shows how to maintain your floors easily and economically... how to give them more beauty, longer life with the Multi-Clean Method.

WRITE TODAY FOR YOUR COPY!

**MULTI-CLEAN**  
PRODUCTS, INC.

2277 Ford Parkway

Dept. MM-4

St. Paul 1, Minnesota

(Circle 44 for more information)

## One-time carbon sets save money by saving clerical time

You've probably watched the typists in your office perform the ritual of inserting loose carbons between sheets of paper, joggling them into alignment, inserting them in the machine, and finding the first writing line—all before they actually do a bit of "productive" work. And if you're a time-conscious executive, you've probably thought it quite a waste—but do you realize how much that waste really costs?

Time studies show that there are 14 seconds devoted to unproductive movement in preparing each 2-part form with loose carbon, and 102 seconds in the preparation of each loose-carbon 12-part form! Translated into actual costs, this means a \$45 a week clerk, preparing 1000 12-part loose-carbon forms, devotes over 26 hours (or \$32.01) per week to unproductive labor. Even though one-time carbon sets cost upwards of twice as much as standard loose-carbon forms, if your office routine demands the use of many multi-part forms, the pre-set one-time carbon form will save you money.

For more information and prices, Circle number 26 on the Reader Service Card.

### Cost of unproductive labor per thousand forms — based on a 40 hour week

#### LOOSE CARBON FORMS

Parts per form	\$35 per week	\$40 per week	\$45 per week	\$50 per week	\$55 per week
2	\$3.31	\$3.78	\$4.35	\$4.86	\$5.33
3	5.47	6.25	7.02	7.82	8.59
4	7.77	8.80	9.99	11.12	12.13
5	9.96	11.40	12.75	14.24	15.65
6	12.16	13.89	15.60	17.36	19.09
7	13.96	15.95	17.94	19.96	21.93
8	16.40	18.74	20.76	23.44	25.66
9	18.53	21.23	23.88	26.56	29.19
10	20.65	23.60	26.52	29.50	32.44
11	22.78	26.04	29.25	32.54	35.79
12	24.89	28.45	32.01	35.58	39.12

#### ONE-TIME CARBON SETS

Parts per form	\$35 per week	\$40 per week	\$45 per week	\$50 per week	\$55 per week
All	1.33	1.52	1.71	1.90	2.09

ing series:

For one copy of five different letters, for two copies of two different letters, for three copies of one letter.

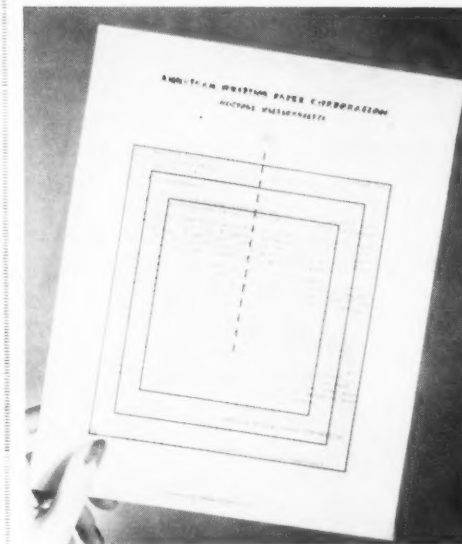
For more information, Circle number 6 on the Reader Service Card.



### Free Letter Placement Guide improves appearance of letters

A new aid for business correspondence is offered free to Management METHODS readers. This useful Letter Placement Guide helps the secretary center every business letter accurately and attractively.

The Guide is 8½" x 11" in size. It slips



into the typewriter underneath the letterhead and remains there until the letter is completely typed. The bold rules on the Guide show through the letterhead and indicate correct margins for short, average-length, or long letters.

This Letter Placement Guide makes it easy to type correctly centered letters. It cuts down retyping—saves time and paper. Also offered is a free Sample Kit of papers for business and office needs.

For a free copy of the Letter Placement Guide and a free Sample Kit, Circle number 15 on the Reader Service Card.



### New machine adds without using motor bar

Figures add and print automatically as they are entered on the keyboard on a "live" Keyboard Adding Machine now on the market.

Until now, all electric adding machines operated in two steps: (1) set up the

methods





amount and (2) depress the motor bar. The new machine *eliminates* that second step.

For example, to add \$100.00, all you do is touch the "1" key in the hundreds column—and the figure instantly adds and prints. You can forget about the motor bar, because every key will operate the machine. Every key is *its own* motor bar.

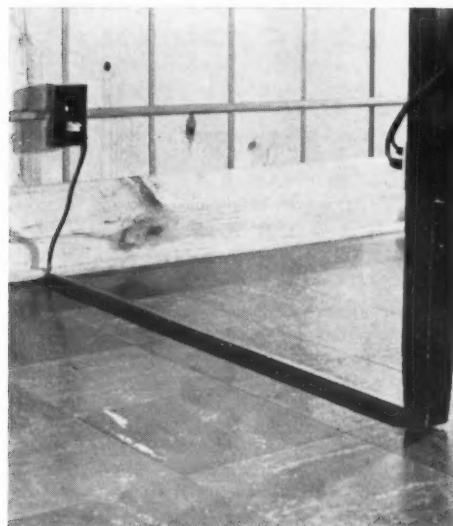
In entering a large amount (like \$1,235.00) you enter the 1-2-3 in the normal manner and then simply depress the last figure (in this case "5") *all the way*—and at once the full amount is added and printed! The hand does not have to shuttle back and forth from the keyboard to a motor bar, but remains always in position on the keyboard. Up to 50% of all hand motion is eliminated.

For more information and free literature, Circle number 11 on the Reader Service Card.



### How to cover wires from phones, business machines

Almost every office is troubled with the problem of exposed wires extending into the middle of a room to reach a desk. Recently announced is a kit, consisting of plug, receptacle and threaded rubber strip-



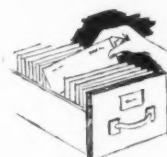
april 1953



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● **FILE IT!**



● **FIND IT!**

Microfilm mounted in cards . . . IBM, Remington Rand . . . McBee Keysort or plain index . . . filed so records are always at your fingertips . . . in a *fraction* of the space required by any other filing system.

For the records worth saving—save the Filmsort way. Less time, space and money to house your valuable files. This foolproof system concentrates facts at point of instant use.

FILMSORT Individualizes Microfilm!

...IT'S IN  
THE  
CARDS

**FILMSORT INC.**

Pearl River  
New York



FILMSORT: Dept. M  
Pearl River, N. Y.  
Send me, without obligation, full information on how FILMSORT can help me solve my filing problems:

NAME.....  
ADDRESS.....  
.....  
COMPANY.....  
CITY.....STATE.....

(Circle 61 for more information)

ping, to cover such wires safely and simply. All that is needed for installation is to cement the rubber strip to the floor and to mount the receptacle on the desk, bench, or other piece of furniture, with two screws. A tube of specially prepared cement is included with full installation instructions.

The stripping is flat and feather-edged, which eliminates any possibility of tripping, stubbing, or stumbling. Dirt cannot lodge along the edges. The ducts can be scrubbed over and waxed, and will not kick loose from the floor.

For more information and prices, Circle number 13 on the Reader Service Card.



### Collective collated sets kept secure by collating stacker

Substantial savings in time and trouble are promised users of the newly-designed collating stacker, a sturdy unit that holds and protects collated sets of sheets or forms awaiting further processing. The collating



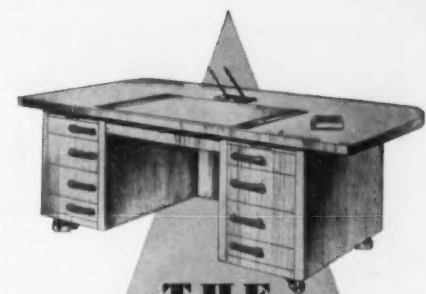
stacker prevents accidental knocking over of stacks, thus eliminating costly waste and spoilage.

Designed for use where collating is done in volume, the collating stacker is sturdily constructed of heavy-gauge steel, with electrically welded joints. Handles are provided for easy carrying from place to place. Four rubber feet, supporting the stacker, prevent the marring of table surfaces.

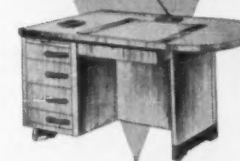
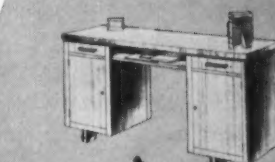
The base, 11 $\frac{1}{4}$ " x 11 $\frac{1}{4}$ ", has a tilting platform, which slants from 4 $\frac{1}{2}$ " high down to 2 $\frac{3}{4}$ " high. This design insures that sheets are always held firmly in place. The stacker is built to accommodate 8 $\frac{1}{2}$ " x 11" stock, and has sides that are 12 $\frac{1}{2}$ " high from the platform.

For more information and prices, Circle number 19 on the Reader Service Card.

(Clippings continued on page 48)



## THE METROPOLITAN GROUP



The most impressive furniture you can place in your office is the new METROPOLITAN Group, by Imperial. Outstanding design and flawless craftsmanship make this the ultimate in luxurious office furniture.

Consult your Imperial desk dealer about the new METROPOLITAN group. Or write us for particulars.



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DESKMARK OF QUALITY

Imperial Desk Company, Evansville 7, Ind.  
(Circle 55 for more information)

# What Makes a Duplicator Pay Off?

**Two basic ways modern office mechanization can save money**—Let's say modern office mechanization enables your organization to handle its present work load in less time or with fewer people.

Or, let's say modern office mechanization enables your people to handle an increased work load with no increase in time. Either way you save time and/or money. That is the purpose of modern office mechanization—that is the pay-off.

And, at present wage-salary rates, it is a sizable pay-off.

But, when you buy modern office equipment, you buy only the means of these savings . . . not the achievement.

**The essential role of management**—Once committed to the goal of achieving these savings, management is confronted with four major prerequisites. The first of these is the selection of the right equipment to satisfy the individual requirements of the organization.

Next comes the need for knowing all practical applications of the equipment.

Third, the personnel using the equipment must be schooled in the efficient operation of the equipment.

Finally there is the responsibility of management to set and maintain standards of operation.

Lacking any one of these, management fails to realize the full savings possible with modern office equipment.

**This is no simple job**—If management elected to try and keep abreast of all new developments in business procedures and methods it would have time for little

else. Therefore, it has become good practice to seek help from qualified specialists.

One such specialist is the A. B. Dick representative.

He is a duplicating specialist.

He offers mimeograph, offset and spirit duplicating products and consequently is unbiased. He is qualified to help management make an honest evaluation of their duplicating requirements and then recommend the specific products to satisfy the individual requirements of the organization.

He has had first-hand experience with many applications in many organizations and therefore can supply management with practical money-saving ideas.

He has the ability and the willingness to maintain instruction in the new techniques of MODERN duplicating. On average days he spends about seventy percent of his time with organizations who have already used his products. This is because duplicating needs are always changing as business changes. New applications are developed. And, above all, there is the ever-present problem of personnel turnover.

If you would like to know more about how others have achieved these savings—how they have made a duplicator pay-off—call your A. B. Dick Company distributor. You'll find him listed under Duplicating Machines in the classified section of your phone book. A. B. Dick mimeograph products are for use with all makes of suitable stencil duplicating products.



## A·B·DICK

THE FIRST NAME IN DUPLICATING

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(Circle 66 for more information)

### Free booklet outlines complete microfilming business service

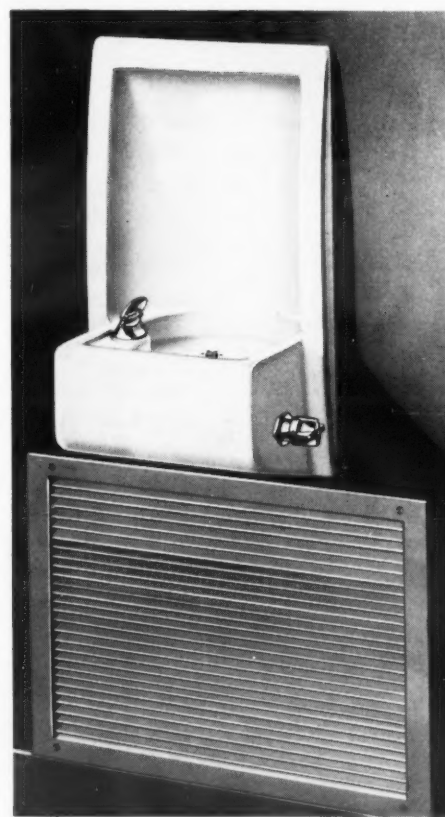
A recently published booklet, available free to *Management METHODS* readers, outlines a seven point service for placing records permanently on microfilm. The service provides an analysis of records to determine which ones should be filmed, preparation of the records for microfilming, the filming itself, and how the films can be indexed for easy record finding.

For a free copy, Circle number 18 on the Reader Service Card.



### New self-contained water cooling unit announced

A new type of self-contained water cooling unit designed for complete in-the-wall mounting has recently been put on the market. Designed to save valuable floor space it also improves the appearance of the office. Featuring chilled water without exposed machine or piping, the new unit also eliminates uncleanable recesses since it has only a flush-with-wall louvered panel as visible evidence of the chilled water source. In addition, it has many of the advantages of a central chilled water system without the long run of insulated piping necessary in that type of installation. It will produce ample chilled water for 50



**NOW YOU CAN PRINT YOUR OWN LABELS AT THE SAME TIME YOU ADDRESS OR MARK THEM!**



**The remarkable WEBER Tag-O-Graph eliminates the need for costly, pre-printed shipping and identification labels and speeds up labeling and marking operations.**

Now you can have the size and type of label you want . . . in the quantities you need . . . when you want them . . . all at a moment's notice! The new Weber Tag-O-Graph prints, addresses or marks shipping and identification labels from a roll of gummed or ungummed stock, in one continuous operation . . . at the rate of 100 to 150 per minute. And counts and cuts them to practically any size you want, too. Reproduces from an inexpensive, easily-prepared stencil. No complicated mechanisms, anyone can operate it. Available in manual and electric models. For rental, too.

**WEBER** "For the answers to all your addressing, labeling and marking problems."

Send today for samples of labels printed by this machine and further information. No obligation, of course.

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Yes, send me without obligation samples of labels printed by the Weber Tag-O-Graph.

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Individual \_\_\_\_\_ Title \_\_\_\_\_

(Circle 30 for more information)

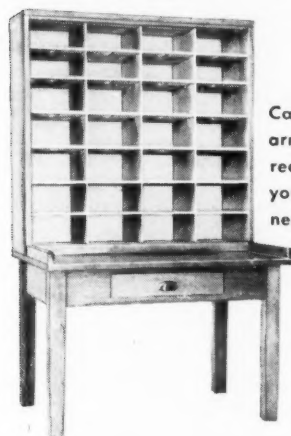
methods





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**CORBIN'S** facilities and more than fifty years' experience combined, are your assurance of quality equipment at low cost. We will help you choose equipment to meet your requirements. All items are constructed of selected hardwoods. Joints are dovetailed and glued. All surfaces are smooth sanded and varnished or lacquered. Shipped to you assembled, complete with hardware.



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The American Hardware Corp.  
New Britain, Conn.

Please send illustrated literature and prices on Corbin mail handling equipment.

Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_

(Circle 73 for more information)

april 1953

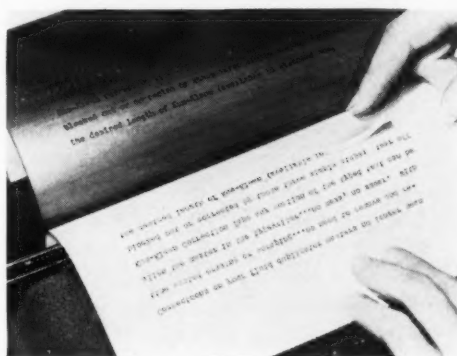
persons per hour per fountain. According to the manufacturer, it can be easily installed. A separate, removable louvered panel gives full access to the cooling unit and compressor.

For more information and prices, Circle number 12 on the Reader Service Card.



### New correction tape for fluid duplicators

A new self-adhesive tape for making corrections on fluid duplicator masters without mess of smear has been announced. It is claimed that any portion of the text can be corrected or blocked out without removing the master from the typewriter. The tape sticks instantly without moistening and is pressed on the reverse side of



the master over the portion to be corrected. The correction is then typed on the tape using the same carbon.

The method eliminates soiled hands and clean-up time. The tape itself is unaffected by heat, moisture or typewriter vibration.

It is supplied in single, double and five-line widths for corrections or block-outs. The rolls are designed for use in a handy dispenser which requires no more space than a stapler.

For more information, Circle number 24 on the Reader Service Card.



### Special pen and ink for marking identification tags

Following the development of the DASH-aplate and its successful use for material identification tags, the Army Air Force, one of the biggest users of these metal tags, was faced with a new problem.

"How can we add or change information on the metal identification tags, such

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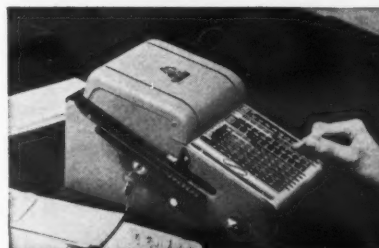
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(Circle 83 for more information)

### It Costs Less to Prevent Errors... Than to Pay for Them



Time-saving Instant Safeguard Checkwriters are so designed to permit the operators to insert checks without the necessity of positioning same. This is accomplished automatically by gravity feeds. Consequently, this time saving element permits operators to concentrate their time on more important functions such as the amount verification. The ultimate result is the prevention of error which normally involves considerable expense and effort to correct.

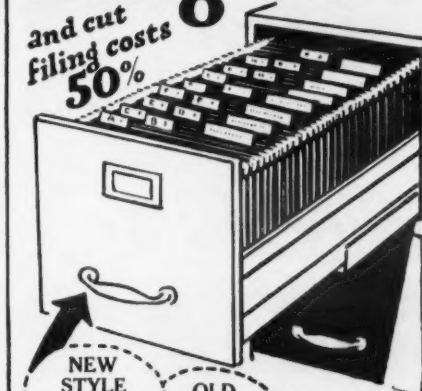
Safeguard's bank account protectors are available in H, K, Voucher and International models. There is a Safeguard checkwriter to fit all types of checks made in conformity with the standards suggested by the American Banker's Association. Machines write from 6 to 13 columns and from 1 to 10 currencies.

For complete information on Safeguarding your bank account and checkwriting, write directly to Safeguard Corp., Lansdale, Pa.

(Circle 37 for more information)

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CITY & STATE \_\_\_\_\_

(Circle 42 for more information)

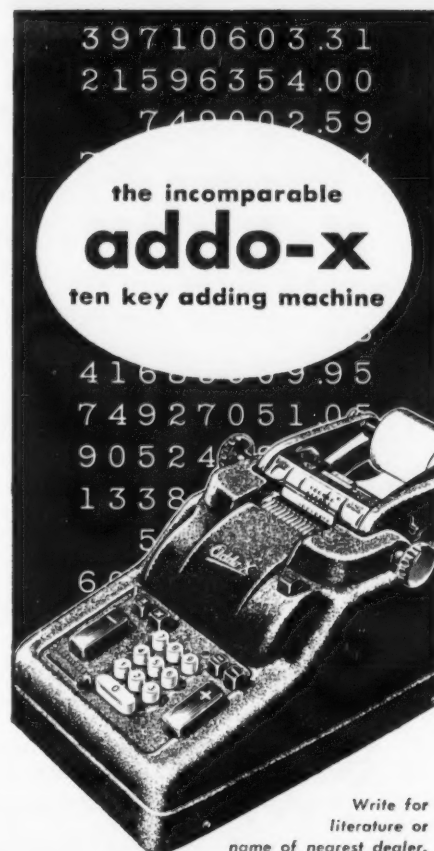


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HALF-BURN  
"Those Papers"  
SHRED THEM!**

Be safe! In one simple, clean operation, SHREDMASTER paper shredders cut obsolete confidential documents, etc., into long, thin shreds, worthless except as good packing material.

And SHREDMASTERS pay for themselves quickly! For complete details, request Circular #4.

**THE SHREDMASTER CORPORATION**  
199 Willoughby Ave., Brooklyn 5, New York  
(Circle 36 for more information)

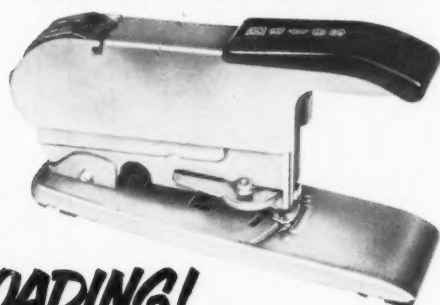


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(Circle 75 for more information)

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Order.....  
Name.....  
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City..... Zone..... State.....  
My Dealer's Name is.....

(Circle 70 for more information)



as reinspection date or special instructions, without completely removing the tag from the equipment?"

"Is it possible to produce a writing fluid for use on these identification tags which will withstand the chemical cleaning solutions in process parts must go through as well as exposure to the elements in extremes of weather? It has to be an ink marking solution which will not rub off, yet one that could be erased and changed if necessary."

The new pen, as easy to use as an ordinary fountain pen, answers the above requirements.

It has a felt-tipped pen line and it is as simple to fill as a pocket cigarette lighter. It holds a chemical ink which will not rub off when marked on the metal plate, yet it can be easily erased with an ordinary pencil eraser if desired.

Tests have shown the ink to resist removal by solutions of the following: silver cyanide plating, lead plating, indium plating, chromium plating, chromic acid anodize, nickel sulphate plating, acid copper plating, alkaline tin plating, cyanide copper plating, ammonium nitrate, Unichrom nickel stripping and sodium cyanide dip.

This ink is also being used on ink pads used for inspectors' stamps on metal identification tags.

For more information, Circle number 8 on the Reader Service Card.

**New plastic cleaner for typewriter, business machine type**

A very effective type cleaner for removing ink, dirt, and grime from any office machine using type has recently been packaged in a new flat shape. Simple to use, it's merely pressed on surfaces to be cleaned, after which the soiled section can be folded in, allowing a clean surface for the next application. Since no liquid is involved there is nothing to spill or stain furniture or clothing. The item retails for 50 cents.

For more information, Circle number 16 on the Reader Service Card.

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(Circle 80 for more information)



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